KD Campus
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2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009

SSC MOCK TEST – 17 (SOLUTION)

1. (C) The way tractor pulls the trailer, similarly the horse pulls the cart.
2. (C) Seismography is used to measure Earthquake and Barometer is used to measure pressure.
3. (A) $\sqrt{64} = 8$, $8^3 + 1 = 513$

   $\sqrt{144} = 12$, $12^3 + 1 = \mathbf{1729}$
4. (C) $\frac{8 + 8^2}{2} = \frac{8 + 64}{2} = 36$

   $\frac{12 + 12^2}{2} = \frac{12 + 144}{2} = \frac{156}{2} = \mathbf{78}$
5. (D) T S N O R Q (+1, −1, −3) Q P K **L O N** (+1, −1, −3)
6. (C) Malaria is a disease and spear is a weapon.
7. (C) 'Puppy' is the offspring of Dog. Similarly, 'Lamb' is the offspring of Goat.
8. (C) H J S M G I R L S O F T R N E S (−1, −1, −1, −1)
9. (D)
10. (A)
11. (C) Letter U is a vowel.
12. (C) P T V R (+4, +2, −4) M Q S O (+4, +2, −4)
    O U S Q (+6, −2, −2) D H J F (+4, +2, −4)
13. (A) In word 'Education', we can find all 5 vowels a, e, i, o and u.
14. (D) 5922 is divisible by 47.
    2619 is divisible by 27.
    and 1904 is divisible by 17.
    but, 1509 is not divisible by 13.
15. (D) In word 'GUY', we can find the vowel 'U' whereas in other three words we can't find any vowel.
16. (C) $1369 = 37^2$,
    $2209 = 47^2$,
    $2197 = 13^3$, (not a perfect square)
    $1849 = 43^2$
17. (D) Onida, LG and Samsung are companies dealing in consumer durables whereas HCL is an IT company.
18. (C) Monday, Friday, Holiday and Wednesday are meaningful words which we get after arranging, and Holiday is different from other three.
19. (B) Food is served by butler in the restaurant and butler is called postman as per the given instruction.
20. (A) $8 \div 4 - 6 + 3 \times 4$

    After changing the signs we have,
    $8 \times 4 + 6 \div 3 - 4$
    $= 8 \times 4 + 2 - 4$
    $= 32 + 2 - 4$
    $= 30$
21. (D)

Word:-	W	A	S	H	I	N	G	T	O	N
Position in :- Alphabet	23	1	19	8	9	14	7	20	15	14
Position in :- Word	1	2	3	4	5	6	7	8	9	10

22. (A) R I G H M G (P L E A S E) then, **M I G G R** (S L E E P)
23. (B) 17, 34, 102, 408, **2040** (×2, ×3, ×4, ×5)
24. (C) 27, 25, 343, 81, **1331**, 169 (3^3, 5^2, 7^3, 9^2, 11^3, 13^2) (+2, +2, +2, +2, +2)
25. (C) 11, 23, 48, 99, 202, **409** (×2+1, ×2+2, ×2+3, ×2+4, ×2+5)
26. (A) We have 32 triangles in given figure.
27. (C) Appointment time with dentist = 7:20
    Clock time (Reflection) = 4:40
    Clock time (Real) = 12:00 – 4:40
    = 7:20
    So we can say that Sushma (she) is on time.
28. (B)

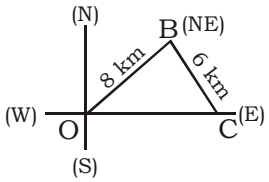
Sign		Relation
+	=	Brother
×	=	Mother
÷	=	Sister

    R + P × S
    Mother's Brother — Mother — Son
    Uncle
29. (A) Only two meaningful words (PREY, PYRE) can be formed.
30. (C)

Self value	Green	Yellow	New	Old	Law report	Gazett
A	×	✓	✓	×	✓	×
B	✓	×	✓	×	✓	×
(C)	(✓)	×	×	(✓)	(✓)	×
D	×	✓	✓	×	×	✓
E	✓	×	×	✓	×	✓
F	×	✓	×	✓	×	✓

    So we can say that volume 'C' is green covered, old and law report.
31. (A) $16 \times 8 = 128 \xrightarrow{\text{reverse}} 821$
    $14 \times 9 = 126 \xrightarrow{\text{reverse}} 621$
    $22 \times 8 = 176 \xrightarrow{\text{reverse}} 671$

32. (D)



O = Starting point
OC = Distance from starting point
$OC^2 = OB^2 + BC^2$

$\Rightarrow OC = \sqrt{OB^2 + BC^2}$

$= \sqrt{8^2 + 6^2}$

$= \sqrt{64 + 36}$

$= \sqrt{100}$

= 10 km

33. (D) N > Ke > V
A > N > Ki
V > Ki then we have
A > N > Ke > V > Ki
A – Amar, Ke – Keshav, V – Vijay, N – Nitin, Ki – Kishan
So, Kishan is shortest among them.

34. (B) 1 8 64 343 1331
1^3 2^3 4^3 7^3 11^3
+1 +2 +3 +4

35. (D) Word → S T R E A M L I N E
Position → 1 **2** 3 4 **5** **6** 7 8 9 **10**
Meaningful word → M E **A** T
Position → 1 2 **3** 4

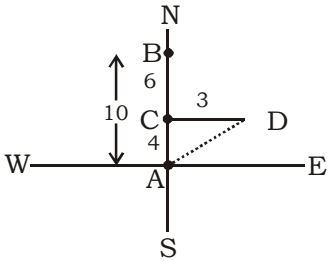
36. (C) Total number of girls in a row = 15 + 9 – 1
= 24 – 1
= 23

37. (A) Angle between both the hands of a clock at 3:40

$= \frac{11M - 60H}{2} = \frac{11 \times 40 - 60 \times 3}{2}$

$= \frac{440 - 180}{2} = \frac{260}{2} = 130°$

38. (A)



$AD^2 = AC^2 + CD^2$

$AD = \sqrt{AC^2 + CD^2}$

$= \sqrt{3^2 + 4^2}$

$= \sqrt{9 + 16}$

$= \sqrt{25}$

= 5

So, Krishnakant is in 5 km North-east direction from the starting point.

39. (D) Given: A = –, C = ×, D = ÷, E = +
then, 14 C 3 A 12 E 4 D 2
14 × 3 – 12 + 4 ÷ 2
= 14 × 3 – 12 + 2
= 42 – 12 + 2
= 44 – 12
= 32

40. (D) Boys = 70 ↓ 50% boy attended → 70 × 50% = 35
Girls = 50 ↓ 40% girls attended → 50 × 40% = 20
Total number of Students attended a musical programme = 35 + 20 = 55
So percentage of number of Students attended a musical programme

$= \frac{55}{70 + 50} \times 100\%$

$= \frac{55}{120} \times 100\%$

= 45.83%

= 46% (Approx.)

41. (D) 42. (A) 43. (B)
44. (D) 45. (D) 46. (B)
47. (B) 48. (C)

49. (A) S T A B L E L A B O U R
1 2 3 4 5 6 5 3 4 7 8 9
Then, B O T T L E
4 7 2 2 5 6

50. (B)

51. (C) OC = OB (radii of the circle)
$\Rightarrow \angle OCB = \angle OBC = 15°$
$\therefore \angle BOC = 180° - (15° + 15°)$
$= 180° - 30 = 150°$
again OA = OB
$\Rightarrow \angle OAB = \angle OBA = 50°$
$\therefore \angle AOB = 180° - (50° + 50°)$
$\angle AOB = 80°$
Now $\angle AOC = \angle BOC - \angle AOB$
$= 150° - 80°$
$= 70°$

52. (C) Length of wire = 132 m = 13200 cm

No. of circles = $\frac{13200}{2.64}$

$= \frac{13200 \times 100}{264} = 5000$

53. (C) $2x + y = 17$ and $y + 2z = 15$
By substracting equation

$2x + y = 17$

$-\quad y + 2z = 15$

$2x - 2z = 2$

$(x - z) = 1$ and $x + z = 9$

by adding above equations

$2x = 10$, $\boxed{x = 5}$

$\therefore y = 17 - 2x = 17 - 2 \times 5 = 7$

$z = 9 - x = 9 - 5 = 4$

$\therefore 4x + 3y + z = 4 \times 5 + 3 \times 7 + 4$

$= 45$

54. (D) $\dfrac{x}{x^2 + 2x + 1} = 6$

then, $6x^2 + 12x + 6 = x$

$6x^2 + 6 = -11x$

Dividing both side by 6x we get

$\dfrac{6x^2}{6x} + \dfrac{6}{6x} = \dfrac{-11x}{6x}$

$\boxed{x + \dfrac{1}{x} = \dfrac{-11}{6}}$

55. (D) If $a + b + c = 0$, then

$\therefore a^3 + b^3 + c^3 - 3abc = 0$

56. (D) $x^2 + y^2 - 4x - 4y + 8 = 0$

$(x^2 - 4x + 4) + (y^2 - 4y + 4) = 0$

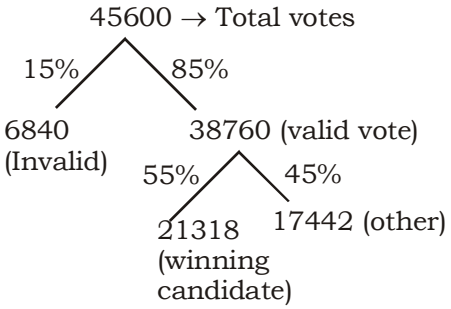
$(x - 2)^2 + (y - 2)^2 = 0$

$\therefore (x - 2) = 0$, $\boxed{x = 2}$

$(y - 2) = 0$, $\boxed{y = 2}$

$\therefore \boxed{x + y = 4}$

57. (D)



The other candidate got = 17442

58. (D) Let the second sum be ₹ x

Then, $\dfrac{7500 \times 6 \times 1}{100} + \dfrac{x \times 10 \times 1}{100}$

$= \dfrac{(7500 + x) \times 17 \times 1}{100 \times 2}$

$\Rightarrow 450 + \dfrac{x}{10} = \dfrac{1275}{2} + \dfrac{17x}{200}$

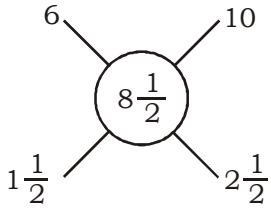
$\Rightarrow \dfrac{x}{10} - \dfrac{17x}{200} = \dfrac{1275}{2} - 450$

$\Rightarrow \dfrac{3x}{200} = \dfrac{375}{2}$

$\Rightarrow x =$ ₹ 12500

Short trick

From the rule of alligation



$\therefore$ Ratio between 1st and 2nd sum = 3 : 5

$\therefore$ 2nd sum = $\dfrac{5}{3} \times 7500$ = ₹ 12500

59. (A) Let the original price of 1 banana be ₹ x

New rate = 120% of x = ₹ $\dfrac{6x}{5}$

Number of bananas bought in ₹ 40 = $\dfrac{40}{x}$

New quantity = $\dfrac{40 \times 5}{6x} = \dfrac{100}{3x}$

$\therefore \dfrac{40}{x} - \dfrac{100}{3x} = 4$

$\Rightarrow \dfrac{120 - 100}{3x} = 4 \Rightarrow \dfrac{20}{3x} = 4$

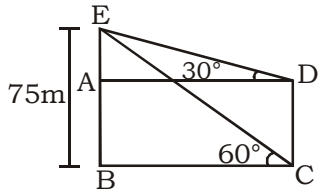
$\Rightarrow 3x = 5$

$x =$ ₹ $\dfrac{5}{3}$

$\therefore$ price of 21 bananas before increment

$= \dfrac{5}{3} \times 21$ = ₹ 35

60. (A)



BE is the pillar

DC is the Building

In ΔBEC, $\tan 60° = \dfrac{BE}{BC} = \dfrac{75}{BC}$

$= BC = \dfrac{75}{\tan 60°} = \dfrac{75}{\sqrt{3}} = 25\sqrt{3}$

In ΔADE, $AD = BC = 25\sqrt{3}$

$\tan 30° = \dfrac{AE}{AD} = \dfrac{AE}{25\sqrt{3}}$

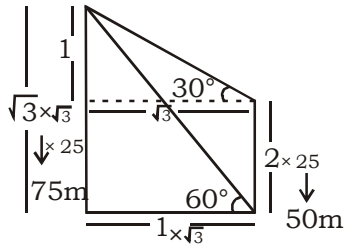
$\Rightarrow AE = 25\sqrt{3} \times \tan 30° = 25\sqrt{3} \times \frac{1}{\sqrt{3}}$

$\Rightarrow AE = 25m$

$DC = AB = BE - AE = 75 - 25 = 50m$

$\therefore$ Height of building = 50m.

Short trick



61. (C) Let the weight → 1000

–30% (Less weight) → 700; –44% → 560

Difference → 140

$\text{Loss\%} = \frac{140}{700} \times 100$

Loss = 20%

62. (D) Let the length of each train be x metre

Relative speed = 46 – 36 = 10 km/h

$= 10 \times \frac{5}{18}$ m/s $= \frac{25}{9}$ m/s

$\therefore \frac{x + x}{25/9} = 36$

$\Rightarrow \frac{2x \times 9}{25} = 36$

$\boxed{x \Rightarrow 50\,m}$

63. (C) If there is 50% increase in 80 kms/hr

Then new speed $= 80 \times \frac{150}{100} = 120$ km/hr

Avg. speed $= \frac{2(x \times y)}{x + y}$

$= \frac{2(80 \times 120)}{80 + 120}$

$\Rightarrow \frac{19200}{200} = 96$ km/h

64. (A)

A	:	B	|	B	:	C
1000	:	900		400	:	360
$10_{\times 10}$	:	$9_{\times 10}$		$10_{\times 9}$	:	$9_{\times 9}$

Equal

	A	:	B	:	C
Efficiency →	100	:	90	:	81
In 500 m race	↓×5		↓×5		↓×5
	500		450		405

Then required distance = 500 – 405

= 95 m

65. (C) Let the distance of the place from the starting point be x km

$\therefore$ The speed of the man along the stream = 10 + 3 = 13 kms/hr

Speed of man against the stream = 10 – 3 = 7 kms/hr

$\therefore \frac{x}{13} + \frac{x}{7} = 1$

or 20x = 13 × 7

$\therefore x = \frac{91}{20}$

x = 4.55 km

66. (C) C.P = 1200

for the first stage i.e, A to B change factor

$= \frac{100 + 10}{100} = \frac{110}{100}$

For the second stage i.e: B to C. Change factor

$= \frac{100 + 5}{100} = \frac{105}{100}$

For the third stage i.e, C to D, change factor

$= \frac{100 - 20}{100} = \frac{80}{100}$

So, S.P for C $= 1200 \times \frac{110}{100} \times \frac{105}{100} \times \frac{80}{100}$

$= \frac{1200 \times 231}{250}$

= ₹ 1108.8

Short trick

$10\% \rightarrow \frac{1}{10}$, $5\% \rightarrow \frac{1}{20}$, $20\% \rightarrow \frac{1}{5}$

10	—	11
20	—	21
5	—	4 (Loss)
1000	—	924
↓×6/5		↓×6/5
Cost price		Selling price
1200		1108.8

67. (C) Let the C.P. of each article be ₹ x

$\therefore \frac{50x \times 120}{100} + \frac{50x \times 140}{100} - \frac{100x \times 125}{100} = 100$

$\Rightarrow 60x + 70x - 125x = 100$

$\therefore 5x = 100$

$x = ₹\ 20$

68. (D) Wages of 10 women in 5 days = ₹ 2500

$\therefore$ 1 woman in 5 days = $\frac{2500}{10}$

1 woman = 1 day = ₹ $\frac{2500}{10\times5}$ = ₹ 50

Wage of 1 man = 2 × wages of 1 woman
= 2 × 50 = ₹ 100

Required no. = $\frac{3200}{100\times16}$ = 2 men

69. (D) Area of circle = $\pi r^2 = \frac{22}{7}\times14\times14$

= 616 cm^2

Area of sector = $\frac{\theta}{360}\times\pi r^2$

$= \frac{60}{360}\times\frac{22}{7}\times14\times14$

= 102.66

Area of shaded part = 616 – 102.66
= 513.34 cm

Short trick

Area of shaded part = $\frac{360-\theta}{360}\times\pi r^2$

$= \frac{360-60}{360}\times\frac{22}{7}\times14\times14$ = 513.34 cm

70. (C) Distance covered in one revolution

= $\frac{58}{7}$m

$\therefore$ Distance covered in 7 revolutions = $\frac{58}{7}\times7$

= 58m

Time = 4 seconds

$\therefore$ Speed of the train = $\frac{58}{4}\times\frac{18}{5}$

= 52.2 kms/hr

71. (D) $\sec\theta + \tan\theta = 2+\sqrt{3}$ ...(i)

$\sec^2\theta - \tan^2\theta = 1$

$(\sec\theta + \tan\theta)(\sec\theta - \tan\theta) = 1$

$\sec\theta - \tan\theta = \frac{1}{2+\sqrt{3}}\times\frac{2-\sqrt{3}}{2-\sqrt{3}}$

$\sec\theta - \tan\theta = 2-\sqrt{3}$ ...(ii)

Equation (i) + equation (ii)

$$\sec\theta+\tan\theta = 2+\sqrt{3}$$
$$\sec\theta-\tan\theta = 2-\sqrt{3}$$
$$2\sec\theta = 4$$

$\sec\theta = 2$

72. (A) $\tan^2A + \cot^2A - \sec^2A.\text{cosec}^2A$

$$= \frac{\sin^2A}{\cos^2A}+\frac{\cos^2A}{\sin^2A}-\frac{1}{\cos^2A.\sin^2A}$$

$$= \frac{\sin^4A+\cos^4A-1}{\cos^2A.\sin^2A}$$

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

$$= \frac{1-2\sin^2A.\cos^2A-1}{\cos^2A.\sin^2A} = \frac{-2\sin^2A\cos^2A}{\cos^2A.\sin^2A}$$

= – 2

73. (B) 20% $\rightarrow \frac{1}{5}$, 10% = $\frac{1}{10}$

ATQ,

Vivek : Nitya	Vivek : Shreya
$6_{\times3}$: 5	$9_{\times2}$: 10
Equal	

Marks of Vivek will be equal in both cases

Ratio of marks

Vivek		Nitya		Shreya
18	:	15	:	20
		↓×66		↓×66
		990		1320

So percent marks = $\frac{1320}{1500}\times100$ = 88%

74. (C) Let the sum deposited every year = x
Rate = 8%

Amount = $P\left(1+\frac{R}{100}\right)^T$

$= x\left(1+\frac{8}{100}\right)^1$

Total principal for 2nd year = $x + x\left(1+\frac{8}{100}\right)$

Amount = $P\left(1+\frac{R}{100}\right)^T$

$= \frac{524}{25}\left(1+\frac{8}{100}\right)^1$

Total principal for 3rd year

$= x+\frac{524}{25}\left(1+\frac{8}{100}\right)$

$= \frac{2029x}{625}$

Amount = $P\left(1+\frac{R}{100}\right)^T$

$= \frac{2029x}{625}\left(1+\frac{8}{100}\right)^1$

$\frac{2029x}{625}\left(1+\frac{8}{100}\right) = 54783$

$\Rightarrow \frac{547834}{15625} = 54783$

$\Rightarrow x = ₹\ 15625$

Short trick

Rate = 8% = $\frac{2}{25}$

$\therefore$ Same amount

625×25	$27_{\times 625}$
25×625	$729_{\times 25}$
15625	19683
15625 (Sum for 1 year)	54783 (Amount after 3 year)

75. (C) 25% (stolen) + 10% (Dropped) $\Rightarrow 35\% = \frac{7}{20}$,

$50\% = \frac{1}{2}$

Sum	–	Remain
20	–	13
2	–	1
40	–	13
$\downarrow \times 130$		$\downarrow \times 130$
5200		1690

76. (C) $\frac{M_1D_1T_1}{W_1} = \frac{M_2D_2T_2}{W_2}$

$\frac{16\times 6\times 25}{150\times 20\times 12} = \frac{12\times 8\times D}{800\times 15\times 6}$

After solving this D_2 = 50 days

77. (D) Principal = ₹ 8100

Rate = 10% P.a. $\Rightarrow$ 20% for every two years

$A = \left[1+\frac{2}{100}\right]^3 \times 8100$

$= \frac{12\times 12\times 12}{10\times 10\times 10}\times 8100$

= 13996.8

78. (C) Formula = $\frac{\text{Days}}{\frac{\text{And}}{\text{Or}}}$

$= \frac{938}{\frac{7}{2}+\frac{5}{5}+\frac{2}{7}}$

$\Rightarrow \frac{938}{\frac{245+70+20}{70}} = \frac{938\times 70}{335}$

= 196 days

79. (B) At the time of marriage = Mother + Father + Son = 42 × 3 = 126 years

After 6 years = 126 + 6 + 6 + 6

= 144 years

Current: M + F + Son + Daughter in law + child = 36 × 5 = 180 years

144 + Daughter in law + 4 = 180 [as child was born after 2 years of marriage so he is of 4 years now]

Daughter-in-law = 180 – 148

= 32 years

At the time of marriage = 32 – 6

= 26 years.

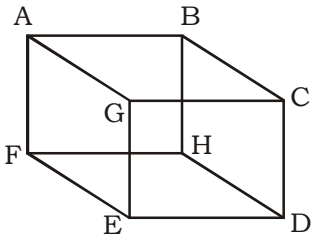
80. (B)

	A : B
Original –	4 : 5
After reduction –	3 : 4
Reduction –	1 : 1

1 unit = 30

A = 4 × 30 = 120

81. (B)



V = 8, S = 6, E = 12

$\therefore$ V + S – E = 2

82. (C) $\frac{\sqrt{x+2}+\sqrt{x-2}}{\sqrt{x+2}-\sqrt{x-2}} = \frac{3}{2}$

$= 2\sqrt{x+2}+2\sqrt{x-2} = 3\sqrt{x+2}-3\sqrt{x-2}$

$= 5\sqrt{x-2} = \sqrt{x+2}$

$= \frac{\sqrt{x+2}}{\sqrt{x-2}} = \frac{5}{1}$

Squaring both the sides

$= \frac{x+2}{x-2} = \frac{25}{1}$

= x + 2 = 25x – 50

$\therefore$ 24x = 52

$= x = \frac{52}{24} = \frac{13}{6}$

$\boxed{6x = 13}$

83. (D) $\frac{\sin A-\sin C}{\cos C-\cos A}$

$= \frac{2\cos\left(\frac{A+C}{2}\right)\sin\left(\frac{A-C}{2}\right)}{2\sin\left(\frac{A+C}{2}\right)\sin\left(\frac{A-C}{2}\right)}$

$= \cot\left(\frac{A+C}{2}\right)$

$= \cot\left(\frac{\pi}{2}-\frac{B}{2}\right)$ [$\because$ A + B + C = π]

$= \tan\left(\frac{B}{2}\right)$

84. (A) Let C.P of article = Rs. 100
marked Price = x
Single equivalent discount

$= \left(20+\frac{25}{4}-\frac{20\times25}{400}\right)\%$

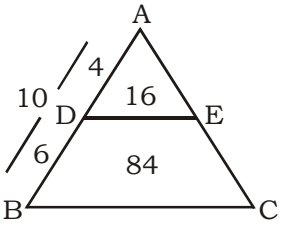
= 25%

$\therefore\ x\times\frac{75}{100} = 120$

$\Rightarrow x = \frac{120\times100}{75} = 160$

$\Rightarrow$ 160 – 100
$\Rightarrow$ 60%

85. (C)



Area = 16 : 84
= 4 : 21

86. (D) Let 0.9 = a, 0.2 = b & 0.3 = c

then, $\frac{a^2+b^3+c^3-3abc}{a^2+b^2+c^2-ab-bc-ca}$

$= \frac{(a+b+c)(a^2+b^2+c^2-ab-bc-ca)}{(a^2+b^2+c^2-ab-bc-ca)}$

= a + b + c $\Rightarrow$ 0.9 + 0.2 + 0.3
= 1.4

87. (A) $\frac{3}{4} = 0.75$

$\therefore\ \frac{35}{71} = 0492$

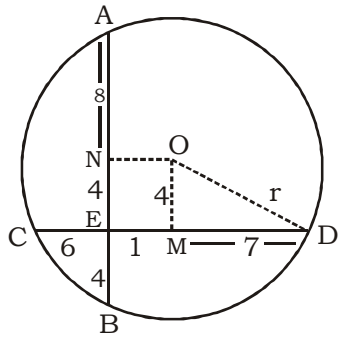
$\frac{13}{20} = 0.65$

$\frac{71}{101} = 0.702$

$\frac{19}{24} = 0.791$

Hence, $\frac{19}{24}$ is greater than $\frac{3}{4}$

88. (C)



AE × EB = CE × ED
12 × 4 = 6 × ED
ED = 8
OM ⊥ Ed $\Rightarrow$ CM = MD = 7
Here EN = OM = 4
Now in ΔOMD
$OD^2 = OM^2 + MD^2$

$\Rightarrow OD = \sqrt{OM^2+MD^2}$

$= \sqrt{(7)^2+(4)^2} = \sqrt{49+16}$

$\Rightarrow = \sqrt{65}$

89. (B) Maximum quantity in each bottle
= H.C.F of 21, 42 and 63 litres
= 21 litres
Required least number of bottles

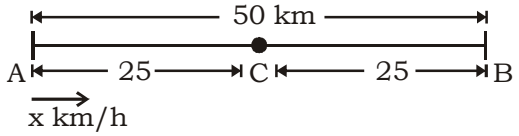
$\Rightarrow \frac{21}{21}+\frac{42}{21}+\frac{63}{21}$

$\Rightarrow$ 1 + 2 + 3 = 6

90. (A) Leak $\rightarrow$ 4 hour
Leak+ Fill $\rightarrow$ 6 hour
$\sum 12$: 3, 2

Time taken to empty the whole cistern
= 12 hr
1 min = 3 litres
1 hr = 60 × 3 $\rightarrow$ 180 litres
Capacity of cistern = 180 × 12 = 2160 litres

91. (C)



Let the speed of motorcyclist is x km/h
Note : In such type of questions, use this formula-

$$\boxed{\text{Distance} = \frac{xy}{x-y}\times(t_2-t_1)}$$

D = 25 kms

$25 = \frac{x(x+10)}{10}\times\frac{5}{60}$

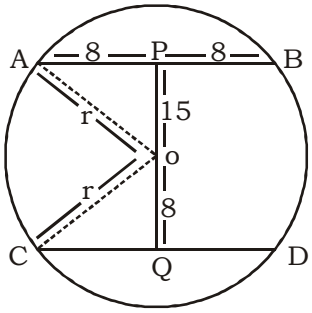
$\Rightarrow$ x(x + 10) = 3000

50 × 60

$\therefore$ x = 50 kms/hr

Speed of motor cyclist = 50 km/h

92. (B)



Radius

$\therefore$ OA = $\sqrt{(8)^2 + (15)^2}$

= $\sqrt{289}$ = 17 cms

New, in ΔOQC

$r^2 = OC^2 = OQ^2 + QC^2$

$\Rightarrow (17)^2 = (8)^2 + (QC)^2$

$\Rightarrow$ (QC)2 = $\sqrt{(17)^2 - (8)^2}$

$\Rightarrow$ QC = $\sqrt{289 - 64}$ = $\sqrt{225}$

= 15 cm

$\therefore$ chord CD = 2QC

$\Rightarrow 2 \times 15 = 30$ cm

93. (D) All sides of quadrilateral PQRS touch the circle,

Therefore, PQ + SR = PS + QR

but PQ + SR = 16 cms

$\therefore$ PS + QR = 16 cms

So, perimeter of quedrilateral PQRS = 16 + 16 = 32 cm

94. (A) π radian = 180°

$\Rightarrow$ 1 radian = $\frac{180°}{\pi}$

$\Rightarrow \frac{3}{2}$ radian = $\frac{180°}{\pi} \times \frac{3}{2} = \frac{180 \times 3 \times 7}{22 \times 2}$

= 85.90°

Similarly,

$\frac{4}{3}$ radian = 76.36°

$\therefore$ The third angle = 180° – (85.90° + 76.36°)
= 18.55°

$\therefore$ The angle of the triangles are-
85.90°, 76.36°, 18.55°

$\therefore$ The triangle is an acute angled triangle

95. (B) Production of company AVC in 2012 = 360 crore units

Average production of AVC over the given years = $\frac{1970}{6}$

Hence, required per cent = $\frac{360 \times 6}{1970} \times 100$

= 109.64% $\approx$ 110%

96. (C) Approximate percent increase or decrease in production from the previous year for SIO are as follows :

2010 = $\frac{2}{85} \times 100$ = 2.35%

2011 = $\frac{2 \times 100}{87}$ = 2.29%

2012 = $\frac{2 \times 100}{89}$ = 2.24%

2013 = $\frac{1 \times 100}{91}$ = 1.09%

2014 = $\frac{4 \times 100}{92}$ = 4.35%

Hence, in the year 2014, SIO registered maximum increase in productions over the previous year.

97. (C) Sum of the productions of the compaines in first three years and the last three years in ₹ crore is as follows:

Company	**First three years**	**Last three years**
TP	358	349
ZIR	238	267
AVC	900	1070
CTU	836	852
PEN	90	127
SIO	261	279

98. (C) Total production of the six companies in first two given years = 863 + 927 = 1790
Again, total production of the six companies in last two given years = 989 + 991 = 1980

Therefore, required percent = $\frac{1790 \times 100}{1980}$

= 90.40%

99. (B) The required difference
= (91 – 90) crore units = 1 × 10000000
= 10000000 units

100. (C)Those compaines are:
ZIR, PEN and SIO

101. (B) The diameter of the earth at equator is 12756 Km.
→ At pole, its diameter is 12713 Kms
→ The earth takes 365 days, 5 hours and 48 minutes for one revolution around the sun.

103. (C) Largest continent of the world –Asia.
Smallest continent of the world – Australia.
Asia originated from term 'Asu' of Hebew language which means rising sun.
It is 30% of the whole world and 60% of total population of world lives in Asia.
The highest peak is Mt Everest (8848 m.)

106. (C) Tomb of Hazrat Nizamuddin Aulia is situated in Delhi.
Tomb of Khwaza Moinuddin Chisti is located in Ajmer.

107. (A) Mahavir was born in Kundgram of Vaishali in 540 B.C.
Mahavir adopted an ascetic life after taking permission from his brother Nandinvardhan.
→ He got enlightenment under Saal tree on the bank of Rizupalika river.
He gave his sermons in Prakrit language.

108. (C) Lactometer is used to measure the purity of water.
Hydrometer is used to measure the purity of water.
Hygrometer is used to measure the atmospheric humidity.
Fadmometer is used to measure the depth of sea. Manometer is used to measure pressure of gases.

110. (D) Sulphur is not a metal, it is a non metal. It is found in Garlic, onion, egg and mustard oil.

111. (B) Congo river crosses equator twice. Limpopo river crosses Tropic of Caner twice

112. (D) Kabir was a disciple of Ramanand.
Guru Nanak was born in Tolwandi in 1469 A.D
He established the Sikh religion.
Main disciple of Kabir – Ghanna (Jatt), Raidas (Harizan), Pipa (Rajput), Sena (Nai) etc.

113. (D) Time period of simple pendulum = 3 sec

$\because \quad T \propto \sqrt{l}$

$\Rightarrow \frac{T_1}{T_2} = \sqrt{\frac{l_1}{l_2}} \Rightarrow \frac{3}{T_2} = \sqrt{\frac{l_1}{9l_2}}$ (length made 9 times)

$\Rightarrow T_2 = 9$ sec

$\therefore$ New time period = 9 sec

115 (B) Earth rotates from west to east. Hence the sun always rises in the east.

116. (C) James Chadwick invented Neutron with its mass (-1.0087×10^{24}) g
J.J. Jhomson invented electron with its mass $(-9.1095 \times 10^{-28})$ g.
Goldstein invented Proton with its mass $(-1.6726 \times 10^{-24})$ g.

118. (C) Radium is the most radioactive. Madam Curie invented Radium. She got noble prize.

119. (C) Samudra Gupta organised Ashwamedha Yajna.
→ He is called the Napoleon of India
→ He received the title of "Ashwa Medhakarta".
→ He also got the title of 'Kaviraj/ Vikramank".

121. (B) Anantverman build Jagarnath Temple of Puri The famous 'Rath Yatra" starts here. Narsinghverman –I build Kavelupuram temple. Chandela rulers build Chausath Yojni Temple. Chandela rulers build Lakshman temple.

122. (D) Ronald Ross invented that Malaria is transmitted by mosquito
→ Laveron invented Plasmodium.
→ Mekkulai first gave the term 'Malaria'.

123. (C) Winston Churchill called Gandhiji as 'Half naked beggar'.

128. (B) Faraday invented Dyanamo. Marconi invented Radio Wireless. Franklin invented bi-focal lens and lighting conductor.

Nuclear reactor	-	Kermi
Light Bulb	-	Edison
X rays	-	Rontzon
Quantum theory	-	Max Plank
Radar	-	Watson Walt
Microphone	-	Graham Bell
Revolver	-	Colt

129. (B) Mass of 1 electron in (amu) = 0.00055

133. (C) Number of people living per square km is called population density.
At present, Bihar has maximum population density in India i.e 1102 people/sq km
Arunachal Pradesh has minimum population density in India i.e 17 people/ sq km
In union territories, maximum population density = Delhi (11,257/sq km)

134. (A) Ashok build Sanchi stupa. It is the highest stupa of India which is located in Madhya Pradesh.
India's national symbol 'Satyameva Jayte' is taken from the Sarnath Pilliar of Ashoka.

146. (D) The Battle of Waterloo was fought on 18th June 1815 near Waterloo (currently Belgium then part of the United Kingdom of the Netherlands). An imperial French army under the command of Emperor Napoleon was defeated by the armies of seventh coalition, comprising an Anglo-Allied army under the command of the Duke of Wellington combined with Persian army.

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Admonish	To warn	चेतावनी देना
Anatomical	The study of the structure of living things	शरीर रचना विज्ञान
Annual/Revoke	To make null and void	निरस्त करना
Appeasing	To make (someone) pleased or less angry by giving or saying something desired	शान्त करना/तुष्टीकरण करना
Armistice	An agreement to stop a war	युद्धविराम
Blissful	Completely happy	अत्यन्त खुश
Blown off	To move along or being carried by the wind	उड़ जाना
Chaste	Morally pure or decent	पवित्र
Discord	Lack of agreement of ideas between people	मतभेद
Doze	To sleep lightly	झपकी लेना
Dusk	The time of day immediately following sunset	गोधुलि बेला
Eclipse	The passing into the shadow of a celestial body	ग्रहण लगाना
Entreaties	A serious request	निवेदन
Expository	Used to describe writing that is done to explain something	वर्णात्मक
Infuse	Inspire	प्रेरणा देना
Instill	Impress	प्रभावित करना
Oratory	The art of speaking in public eloquently	वक्तृत्व कला
Ordain	To officially establish or order	आदेश देना
Platitude	A statement that expresses an idea that is not new	पुरानी बातें
Purview	Horizon	दायरा
Quell	To end or stop by using force	बल से रोकना
Repeal	To make null and void	निरस्त करना
Rescind	To repeal	रद्द करना
Rout	To defeat decisively	हरा देना
Succumb	To stop trying to resist/to die	रोकने की कोशिश करना छोड़ देना/ मर जाना
Subdue	To get control of	कब्जा करना
Sullied	To damage or ruin the good quality	दूषित करना
Tyro	A person who has just started learning or doing something	नौसिखिया
Virtuous	Morally good	अच्छाई से भरा
Yell	Loud cry	चिल्लाहट

SSC MOCK TEST - 17 (ANSWER KEY)

1. (C)	26. (A)	51. (C)	76. (C)	101. (B)	126. (B)	151. (C)	176. (C)
2. (C)	27. (C)	52. (C)	77. (D)	102. (C)	127. (B)	152. (C)	177. (C)
3. (A)	28. (B)	53. (C)	78. (C)	103. (C)	128. (B)	153. (A)	178. (C)
4. (C)	29. (A)	54. (D)	79. (B)	104. (C)	129. (B)	154. (B)	179. (A)
5. (D)	30. (C)	55. (D)	80. (B)	105. (C)	130. (A)	155. (C)	180. (B)
6. (C)	31. (A)	56. (D)	81. (B)	106. (C)	131. (B)	156. (B)	181. (D)
7. (C)	32. (D)	57. (D)	82. (C)	107. (A)	132. (A)	157. (B)	182. (C)
8. (C)	33. (D)	58. (D)	83. (D)	108. (C)	133. (C)	158. (B)	183. (B)
9. (D)	34. (B)	59. (A)	84. (A)	109. (A)	134. (A)	159. (B)	184. (C)
10. (A)	35. (D)	60. (A)	85. (C)	110. (D)	135. (B)	160. (B)	185. (C)
11. (C)	36. (C)	61. (C)	86. (D)	111. (B)	136. (C)	161. (B)	186. (C)
12. (C)	37. (A)	62. (D)	87. (A)	112. (D)	137. (D)	162. (C)	187. (A)
13. (A)	38. (A)	63. (C)	88. (C)	113. (D)	138. (C)	163. (D)	188. (C)
14. (D)	39. (D)	64. (A)	89. (B)	114. (C)	139. (B)	164. (B)	189. (B)
15. (D)	40. (D)	65. (C)	90. (A)	115. (B)	140. (B)	165. (B)	190. (D)
16. (C)	41. (D)	66. (C)	91. (C)	116. (C)	141. (A)	166. (C)	191. (C)
17. (D)	42. (A)	67. (C)	92. (B)	117. (A)	142. (C)	167. (C)	192. (C)
18. (C)	43. (B)	68. (D)	93. (D)	118. (C)	143. (C)	168. (B)	193. (A)
19. (B)	44. (D)	69. (D)	94. (A)	119. (C)	144. (D)	169. (A)	194. (A)
20. (A)	45. (D)	70. (C)	95. (B)	120. (C)	145. (B)	170. (A)	195. (C)
21. (D)	46. (B)	71. (D)	96. (C)	121. (B)	146. (D)	171. (B)	196. (A)
22. (A)	47. (B)	72. (A)	97. (C)	122. (D)	147. (D)	172. (B)	197. (C)
23. (B)	48. (C)	73. (B)	98. (C)	123. (C)	148. (D)	173. (A)	198. (D)
24. (C)	49. (A)	74. (C)	99. (B)	124. (B)	149. (A)	174. (B)	199. (D)
25. (C)	50. (B)	75. (C)	100. (C)	125. (D)	150. (C)	175. (D)	200. (C)

151. (C) Replace 'I' with 'me'. Here we need object form of pronoun.
152. (C) Use 'securing' instead of secure.'With a view to' is followed by a gerund.
153. (A) Add 'while I was' before 'walking'.
154. (B) Change 'student' into 'students'. Here we are talking about a huge number of students.
155. (C) Change 'from yesterday evening' into 'since last evening.'

Note:- If you face any problem regarding result or marks scored, please contact 9313111777

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003