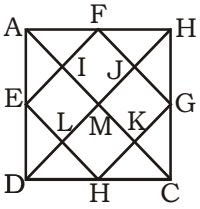
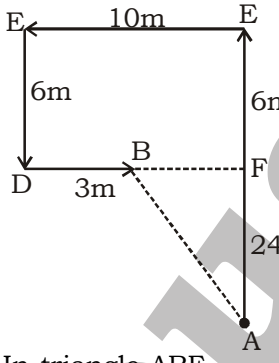
SSC MOCK TEST - 236 (SOLUTION)

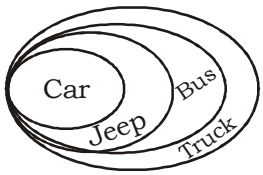
1. (D) Pig to related to Sty similarly.
Dog is related to Kennel.
2. (D) New Delhi is the capital of India.
Islamabad is the capital of Pakistan.
3. (B) $7^2 - 1 = 48$ Similarly, $13^2 - 1$
$11^2 + 1 = 122$ $17^2 + 1$
4. (D) Here except horse all are wild animals.
5. (D) Except New York all are capital of different country.
6. (B) Except (B) all are +1 series.
7. (B) As, H O N E S T Y
5 1 3 2 4 6 8
And, P O V E R T Y
7 1 9 2 0 6 8
Similarly, H O R S E
5 1 0 4 2
8. (A)



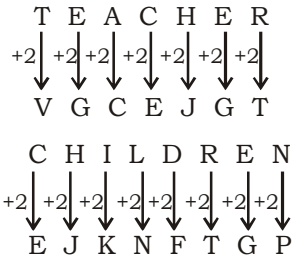
AMD, AMB, BMC, CMD, ADC, BDC, ADB, ACB, AIE, AIF, AEF, FJB, BJB, BFG, GKC, CKH, GHC, HDL, DEL, EDH,
9. (B)
10. (D)
11. (A) Anuj's daughter's mother-Anuj's wife,
Anuj wife's father – Anuj's father-in-law
Father-in-law son - Anuj's brother-in-law's
So Manish is Anuj's brother-in-law's
12. (B) In this matrix operation is made by 'Column Number'.
In 1st column $\Rightarrow (18 - 12)^2 \Rightarrow 36$
In 2st column $\Rightarrow (11 - 13)^2 \Rightarrow 4$
In 3st column $\Rightarrow (19 - 16)^2 \Rightarrow 9$
13. (D) In 1st row $\Rightarrow 3 + 4 + 9 = 16$
In 2st row $\Rightarrow 5 + 6 + 25 = 36$
In 3st row $\Rightarrow 7 + 8 + 49 = 64$
14. (C) Suppose the age of son is = x years
Therefore, the age of father will be 5x + 1
Again, $4(x + 3) - 2 = 5x + 1 + 3$
$4x + 12 - 2 = 5x + 4$
$10 - 4 = 5x - 4x$
$\therefore$ $x = 6$
Age of father = 5x + 1
$= 5 \times 6 + 1 = 31$
15. (D)



In triangle ABF
$AB = \sqrt{(AF)^2 + (FB)^2}$
16. (C) Total students
$= 12 + 18 - 1 = 29$
So, $29 - 13 = 16$ students of Mohan's right side.
17. (B) The day 5th January comes before 28th February and the victory is celebrated in the year (L.Y. + 1)
1964 + 1 = 1965
(L.Y.)
So, according to chart we add 6 years for next celebration on same day
1965 + 6 = 1971
= 5th January, 1971
18. (D)



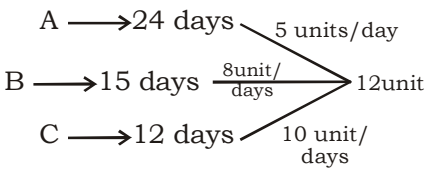
Conclusion: Only IV follows.
19. (A)



20. (C) Clearly, a lizard crawls and the animals that crawl are called 'flying'. So, a lizard is called 'flying'.
21. (C)
22. (D)
23. (C)
24. (B)
25. (D)

27. (C) Savitribai Phule was the wife of Jyotirao Phule. They founded the first indian girls school in Pune, in 1848.
28. (D) Current Repo Rate - 5.15%
Current Reverse Repo Rate - 4.90%
Current Standing Facility Rate - 5.40%
Currect Bank Rate - 5.40%
29. (B) The religious establishment at Sanchi was founded by Asoka (c.272-237bc)
30. (D) Sharda Barrage (UP) - Sharda river.
Tanakpur Barrage - Mahakali river. (Uttarakhand)
Chukka Project - Between India and Bhutan. It is the first large hydro power project, on Wangchhu river (Raidak).
31. (C) World Food programme was founded on 19 Dec, 1961. Its head is David Beasley. Its operations are funded by voluntary donations from governments of the world, corporations and private donors.
32. (C) Femur (thigh bone), is the proximal bone of the hind limb in tetrapod vertebrates and of the human thigh.
33. (D) Top five currencies of the world
1. Kuwaiti → Dinar
2. Bahrain → Dinar
3. Oman → Rial
4. Jordan → Dinar
5. British → Pound Sterling
34. (C) Birla institute of Technology and Science, Pilani is deemed university under section 3 of the UGC act, 1956. It was established in 1964. Its motto is Knowledge is Supreme Power. It is one of the six institutes to be awarded the Institute of Eminence status in 2018.
I.I.T Kharagpur was established in 1951. Its motto is Excellence in Action is Yoga. It was awarded the status of Institute of Eminence in 2019.
I.I.T Roorke was established in 1847. Its motto is Nothing Can be Achieved Without Hard Work.
B.H.U, Varanasi was established 1919.
37. (D) Golden Quadilateral is managed by National Highway Authority of India (NHAI). It connects Delhi, Kolkata, Mumbai and Chennai. The project was planned by 1919, launched in 2001 and was completed in 2012.
38. (D) Dry Ice - D_2O
44. (D) Red worms do not have teeth.
45. (D) On September 1615, Sir Thomas Roe arrived at the Surat port.
46. (A) Craniology - the scientific study of the shape and size of skulls of different human races.
Carpology - the study of fruits and seeds.
Chrematistics - study of wealth
48. (D) Max Planck won Nobel prize in physics in 1918 for the discovery of energy quanteum.
The Diode Bulb was discovered by J.S. Fleming in 1904.
Enrico Fermi was awarded the 1938 Nobel prize in physics for his work on induced radioactivity and discovery of transuranium elements.
50. (B) An Area of Darkness was written by V.S.Maipaul.
51. (A) $\sin^6A + \cos^6A = (\sin^2A + \cos^2A)(\sin^4A + \cos^4A - \sin^2A\cos A)$
$= 1(\sin^2A + \sin A)^2 - 2\sin^2A\cos^2A - \sin^2A\cos^2A)$
$= (1 - 3\sin^2A\cos^2A)$
52. (A) $\frac{\sin\theta+\cos\theta}{\sin\theta-\cos\theta} = \frac{5}{4} \Rightarrow \tan\theta = 9$
$\Rightarrow \frac{\tan^2\theta+1}{\tan^2\theta-1} = \frac{81+1}{81-1} = \frac{82}{80} = \frac{41}{40}$
53. (D) Ratio of sides = 6 : 4 : 3
Required difference = $\frac{182}{13}(6-3)$
$= 14 \times 3 = 42$ cm
54. (C) $\frac{l}{p} = \frac{5}{16} \Rightarrow \frac{p}{l} = \frac{16}{5} \Rightarrow \frac{2(l+b)}{l} = \frac{16}{5}$
$\Rightarrow 2\left(1+\frac{b}{l}\right) = \frac{16}{5} \Rightarrow 1 + \frac{b}{l} = \frac{8}{5}$
$\Rightarrow \frac{b}{l} = \frac{3}{5} \Rightarrow \frac{l}{b} = \frac{5}{3}$
55. (C) $x^4 + \frac{1}{x^4} = 322$ ...(i)
Adding 2 both in equation (i) both sides
$x^2 + \frac{1}{x^2} = 18$ ...(ii)
Substracting 2 in equation (ii) both sides
$x - \frac{1}{x} = 18$ ...(iii)
Taking cube of eq^n (iii)
$\left(x - \frac{1}{x}\right)^3 = 43$
$\Rightarrow x^3 - \frac{1}{x^3} - 3\left(x - \frac{1}{x}\right) = 64$
$\Rightarrow x^3 - \frac{1}{x^3} = 64 + 3 \times 4 = 76$

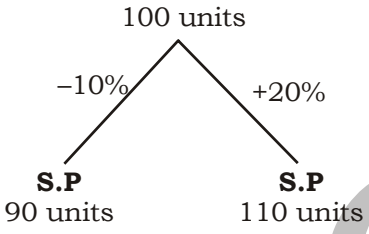
56. (B) $a^{1/3} + b^{1/3} = c^{1/3}$
$\Rightarrow a^{1/3} + b^{1/3} - c^{1/3} = 0$
$\Rightarrow (a^{1/3})^3 + (b^{1/3})^3 + (-c^{1/3})^3 = 3(a^{1/3})(b^{1/3})(c^{1/3})$
$a + b - c = 3(a^{1/3})(b^{1/3})(c^{1/3})$
Taking cube both sides
$(a + b - c)^3 = 27abc$
Hence, option (B) is correct.

57. (D)


B and C do the work in 3 days
= 18 × 3 = 54 units
Remaining work = 120 – 54 = 66 units
A does the work remaining work

$= \frac{66}{5} = 13\frac{1}{5}$ days

58. (C) ATQ,
Let CP is 100 units



30 units → Rs. 332

90 units → Rs. $\frac{332 \times 90}{30} = 996$

59. (C) Let the length of train is l metre

$\frac{l}{12} = \frac{l+170}{36} \Rightarrow 3l = l + 170$

$\Rightarrow l = 85$ metre

Speed of train = $\frac{85}{12} \times \frac{18}{5} = 25.5$ km/hr

60. (C) Total number of students = 640
8 units → 640

5 units → $\frac{5}{8} \times 640$

Number of boys = 400
Number of girls = 240

$\frac{400 + x}{240 + 30} = \frac{14}{9}$

$\Rightarrow 400 + x = 14 \times 30$

$x = 20$
Hence, 20 new boys are admitted.

61. (D)

Intial	Final
5	7
5	4
25 units	28 units
Initial area	Final area

$= \frac{3}{25} \times 100 = 12\%$

62. (A)

CP	MP
72	112
↓×2	↓×2
Rs. **144**	Rs. 224

63. (A) ATQ,

$\frac{4300 \times R \times 2}{100} = 344$

R = 4%

$\Rightarrow \frac{P \times 4 \times 5}{100} = 10104 - P$

$\Rightarrow 6P = 5 \times 10104$

$\Rightarrow P = \frac{5 \times 10104}{6}$

$\Rightarrow P =$ Rs. 8420

64. (D) 2014 to 2017 total number of engineers
= 120 + 132 + 128 + 140 = 520
In 2019 total number of engineers in all four companies
= 150 – 118 + 110 + 122 = 500

The required % = $\frac{520 - 500}{500} \times 100 = 4\%$

65. (C) Total number of engineers recruited by company B in 2014 and 2017
= 90 + 106 = 196
In company C, 2015 to 2019
= 93 + 94 + 98 + 115 + 110 = 500

% percentage = $\frac{196}{500} \times 100 = 39.2$

66. (A) Engineers recruited by
A and B in 2015 and 2018
= (132 + 118) + (148 +112)
= 250 + 260 = 510
C and D in, 2014 and 2018
= (85 + 105) + (105 + 125) = 420

Ratio = $\frac{510}{420} = \frac{17}{14}$

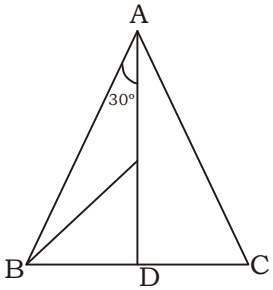
67. (B) Average of engineers recruited by B in given six years

$= \frac{90+118+106+112+118+98}{6} = 107$

The number of years engineers recruited by D is less than in 2014, 2015 and 2016.

The required no. = 3

68. (C)



ATQ,

In ΔABD

$\tan 30° = \frac{BD}{6} \Rightarrow BD = \frac{6}{\sqrt{3}}$

$\Rightarrow \tan \angle ACB = 6 \tan(\angle DBE)$

$\Rightarrow \tan \angle ACB = 6 \times \frac{1}{\frac{1}{\sqrt{6}}}$

$\Rightarrow \tan \angle ACB = \sqrt{3}$

$\Rightarrow \angle ACB = 60°$

69. (A) ATQ,

$\frac{\text{first four numbers}}{4} = 3 \times \text{fifth number}$

$\Rightarrow \frac{3 \times 4 \times \text{fifth number} + \text{fifth number}}{5}$

$= 85.8$

$\Rightarrow$ fifth number = 33

70. (B) $.5\overline{6} - .7\overline{23} + \frac{39-3}{90} \times \frac{7}{9}$

$= .5\overline{66} - .7\overline{23} + \frac{36}{90} \times \frac{7}{9}$

$= .5\overline{66} - .7\overline{23} + \frac{28}{90}$

$= .5\overline{66} - .7\overline{23} + .3\overline{11}$

$= .8\overline{77} - .7\overline{23} = .1\overline{54}$

71. (A) ATQ,

$x = \sqrt{12.8 \times 64.8}$

$y = \frac{57.6^2}{38.4}$

$\frac{2x}{y} = \frac{2 \times \sqrt{12.8 \times 64.8}}{\frac{57.6^2}{38.4}}$

$= \frac{2 \times 38.4 \times \sqrt{12.8 \times 64.8}}{57.6^2} = \frac{2}{3}$

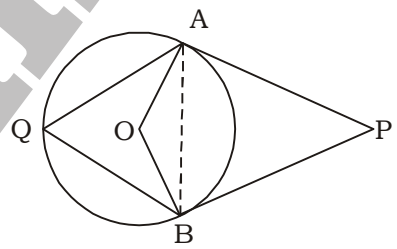
72. (B) $\left(18 \div 2 \text{of } \frac{1}{4}\right) \times \left(\frac{2}{3} \div \frac{3}{4} \times \frac{5}{8}\right) \div \left(\frac{2}{3} \div \frac{3}{4} \text{of } \frac{3}{4}\right)$

$= \left(18 \div \frac{1}{2}\right) \times \left(\frac{2}{3} \times \frac{4}{3} \times \frac{5}{8}\right) \div \left(\frac{2}{3} \div \frac{9}{16}\right)$

$= 36 \times \frac{5}{9} \div \frac{32}{27} = 36 \times \frac{5}{9} \times \frac{27}{32}$

$= \frac{135}{8} = 16\frac{7}{8}$

73. (D)



In ΔABP

$\angle A = \angle B = 59$

In $\angle AOB$

$\angle A = \angle B = 31°$

$\angle AOB = 118$

Now, $\angle AOB = 59°$

74. (B) ATQ,

Income	Expenditure	: Saving
100	85	15
$\downarrow +20\%$		
120	105	15

% percentage increase in his expenditure $= \frac{20}{85} \times 100 = 23.5\%$

75. (A) ATQ,

Rs. $12{,}000 \times \frac{8}{100}$

Ist yr Rs. 960

IInd yr 960 + 76.8

$\left(\frac{5}{8}\right)^{th}$ yr Rs. 699.84

Total CI = Rs. 2697

MEANINGS IN ALPHABETICAL ORDER

Aggressive	ready to attack or confront	आक्रमक
Agility	ability to move quickly	लचीलापन
Absolute	not qualified in any way; total	पूर्ण
Ballad	a long song or poem that tells a story often about love	गाथागीत
Bouquet	an attractively bunch of flowers	गुलदस्ता
Conscious	aware of one's surroundings	सचेत
Contradictory	mutually opposed	परस्पर विरोधी
Condemn	express complete disapproval of; censure	निंदा करना
Dejected	sad and depressed; dispirited	उदास, अवसाद में
Exhaust	make someone very tired	थकना
Exhibit	publicly display a work of art or item of interest	प्रदर्शन करना
Exhale	breathe out	साँस छोड़ना
Extract	remove or take out	सार तत्व निकालना
Exodus	a mass departure of people	प्रस्थान (भारी संख्या में)
Flattering	full of praise and compliments	प्रशंसापूर्ण/चापलूसी
Humiliation	dishonour, embarrassment, disgrace, indignity	अपमान
Hymn	a religious song or poem of praise to God	भजन
Irrevocable	not able to be changed	स्थिर/अपरिवर्तनीय
Indifferent	having no particular interest or sympathy; unconcerned	उदासीन
Infallible	incapable of making mistakes	अचूक
Inhabitant	a person or animal that lives in or occupies a place	निवासी
Miracle	a remarkable event that brings very welcome consequences	चमत्कार
Obligatory	required by a legal, moral or other rule; compulsory	अनिवार्य
Overcome	succeed in dealing with a difficulty	काबू पाना, पार पाना, उबरना
Peaceful	free from disturbance, tranquil	शांतिपूर्वक
Quiescent	in a state or period of inactivity or dormancy	सुस्ती/स्थिर
Reckless	heedless of the consequences of one's action; rash or impetuous	लापरवाह
Refund	pay back money	धन की वापसी
Retaliate	make an attack in return for a similar attack	प्रतिकार करना
Scintillating	sparkling or shining brightly	चमकना
Sonnet	a poem of fourteen lines	गाथा (14 पंक्तियों का)
Stinging	capable of wounding or piercing with a sting	चुभनीय
Sarcasm	the use of irony to mock or convey contempt	व्यंग्य
Tendency	an inclination towards a particular type of behaviour	प्रवृत्ति
Transformation	a marked change in form, nature or appearance	परिवर्तन
Vital	absolutely necessary; essential	महत्त्वपूर्ण

SSC MOCK TEST - 236 (ANSWER KEY)

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

76 (B) One of + Plural noun takes Singular verb. Change 'have' into 'has'.

77. (A) Sentence is in past tense. Change can into could.

78. (A) **Render** – Provide or give
Exert – apply

79. (C) **Fragile** – that can be easily broken.
Volatile – Substance easily evaporated at normal temperature
Ductile – able to be drawn into thin wire.
Frugal – Stingy (कंजूस)

86. (B) Agree with someone.
Agree to something.

87. (B) When two subjects is joined by as well as, along with etc, the verb comes according to the first subject.