SSC MOCK TEST - 341 (SOLUTION)

1. (B) Second is the capital of first.

2. (C) As,

LORD → OLIW (Reverse)

Similarly,

BOWL → YLDO (Reverse)

3. (C) Except Tally, others are a part of MS office.

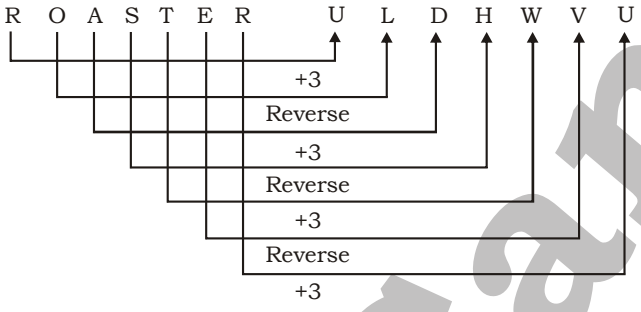
4. (D) (A) $464 \Rightarrow 4^3 = 64$

(B) $5125 \Rightarrow 5^3 = 125$

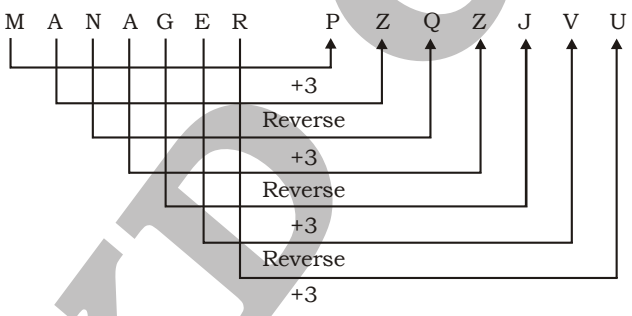
(C) $28 \Rightarrow 2^3 = 8$

(D) $7345 \Rightarrow 7^3 = 343 \neq 345$

5. (B) As,



Similarly,



6. (A) $8 + 2^1 = 10$

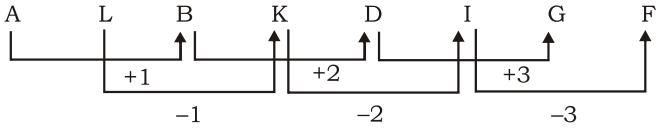
$10 + 3^2 = 19$

$19 + 4^3 = 83$

$83 + 5^4 = 708$

$708 + 6^5 = 8484$

7. (C)



8. (C)

Days	Subjects Being Taught
Monday	Chemistry
Tuesday	Physics
Wednesday	Eco logy
Thursday	Hindi
Friday	English
Saturday	Bio logy

So, Chemistry is taught on Monday.

9. (C) As, $(25 - 18)^2 = 49$
Similarly, $(19 - 13)^2 = 36$

10. (A) l**mn**jk/**l**mnjk/**l**mn**j**k

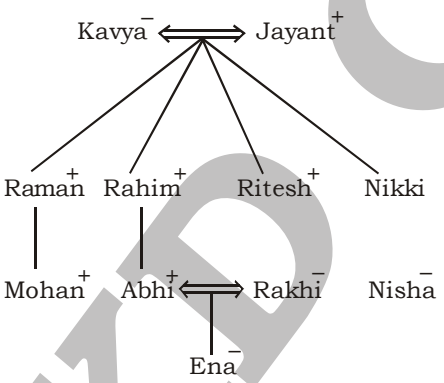
11. (D)

12. (C) **In the first column,**
$(25)^2 - 17 \times 4 = 557$
In the second column,
$(32)^2 - 19 \times 12 = 796$
In the third column,
$(15)^2 - 5 \times 18 = 135$

13. (A) $77 \div 7 + 15 - 11 \times 12 = -62$
After changing 7 and 11,
$77 \div 11 + 15 - 7 \times 12 = -62$
$7 + 15 - 84 = -62$
$22 - 84 = -62$
$-62 = -62$

14. (A)

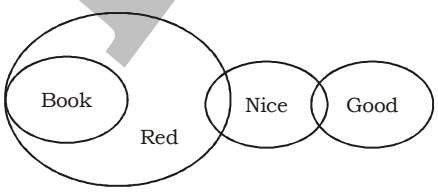
15. (B)



Hence, Jayant is great grandfather of Ena.

16. (B) 5. Catalysis → 4. Catatonic → 3. Category → 2. Catering → 1. Cattle

17. (D)



I. False II. True III. False
Hence, Only conclusuon II follows.

18. (C) 19. (C)

20. (C) Let Varun's age today = x years

Then, Varun's age after 1 year = (x + 1) years

$x + 1 = 2 (x – 12)$

$x + 1 = 2x – 24$

$x = 25$

Varun's present age = 25 years

21. (D) As, $(36 – 17) \times 3 = 57$

Similarly, $(58 – 25) \times 3 = 99$

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

26. (D) The Servants of India Society was formed in Pune, Maharashtra, on June 12, 1905 by Gopal Krishna Gokhale. All are related to this organization.

27. (B) Due to the monsoon drift of Indian Ocean, regular direction of the ocean currents changes twice a year.

28. (C) Representation of states in the Parliament does require a constitutional amendment only with the ratification of the legislature of not less than one-half of the states. Other given options require the same.

30. (A) As monkey and bullet both fall under the same gravitational force, so bullet will hit exactly the same point it has been aimed.

31. (C) Scintillation counter (scintillometer) : An instrument which measures gamma radiation. It is also used in airborne and ground radiometre surveys. This instrument utilizes the flash of light emitted when the atoms of a suitable ' phosphor' are energized by gamma rays. The scintillations are detected by a light - sensitive cathode.

32. (C) A terrestrial ecosystem is an ecosystem found only on landforms. Six primary terrestrial ecosystems which exist are tundra, taiga, temperate deciduous forest, tropical rain forest, grassland and desert.

34. (B) The United Nations designated 12 May the International Day of Plant Health (IDPH) to raise global awareness on protecting the plant health.

36. (A) A famine had struck the district and a large part of Gujarat, and virtually destroyed the agrarian economy. The poor peasants had barely enough to feed themselves, but the British government of the Bombay Presidency insisted that the farmers not only pay full taxes, but also pay the 23% increase stated to take effect that year.

37. (D) Volcanic Mountain. Mount St. Helens, located in Washington State, is the most active volcano in the Cascade Range, and it is the most likely of the contiguous U.S. volcanoes. The volcano is almost 53 km due west of Mount Adams and approximately 80 km northeast of the Vancouver, Washington-Portland,Oregon metropolitan area. Volcanism occurs at Mount St. Helens and other volcanoes in the Cascades are due to subduction of the Juan de Fuca plate off the western coast of North America.

38. (B) In chemistry, neutralization or neutralisation is a chemical reaction in which an acid and a base react quantitatively with each other.

40. (B) Capillary action, or capillarity, is a phenomenon where liquid spontaneously rises in a narrow space such as a thin tube, or in porous materials such as paper or in some non-porous materials such as liquified carbon fibre. This effect can cause liquids to flow against the force of gravity or the magnetic field induction, in blotting of ink, spread of water drop on a cotton cloth and the rising of water from the roots of a plant to its foliage.

41. (C) Uranium oxide is smuggled across border in the form of yellow cake. Uranium oxide is produced by refining tons of dirt (ore) containing uranium to produce "Yellow cake".Typically yellow cake which contains 80% of uranium oxide, melts at approximately 2878°C whereas modern yellow cake contains 70 to 90% triuranium octaxide (U_3O_8) by weight. Yellow cake is used in the preparation of uranium fuel for nuclear reactor. Uranium obtained from yellow cake is also used in making many types of illegal nuclear explosive which are very dangerous to mankind.

42. (A) Eutrophication is the ecosystem response to the addition of artificial or natural substances, such as nitrates and phosphates, through fertilizers or sewage, to an aquatic system. One of its example is the "bloom".

43. (B) After the recent outbreak of 'Tomato flu', which was endemic to Kerala, the neighbouring states are ramping up surveillance to prevent the disease.

44. (B) Charles Wilkins was a member of Asiatic Society of Bengal founded by William Jones. He translated Bhagavad Gita into English in 1794.

45. (D) Forest fires have become a seasonal phenomenon in Indonesia. At the root of the problem is the practice of forest clearance known as slash and burn, where land is set on fire as a cheaper way to clear it for new planting. Peat soil, which characterises much of the affected areas, is highly flammable, causing localised fire to spread making it difficult to stop.

46. (C) According to Article 131, The SC has original jurisdiction in any dispute - " Between the Government of India & one or more States. " Between the Government of India and any State or States on one side and one or more other States on the other. " Between two or more States.

49. (B) The ABO blood group system is widely credited to have been discovered by the Austrian scientist Karl Landsteiner, who found three different blood types in 1990; he was awarded the Nobel Prize in Physiology or Medicine in 1930 for his work.

50. (D) Prime Minister Narendra Modi has recently inaugurated the India's longest cable-bridge over the Narmada River on the Ahmedabad-Mumbai section of NH-8 (New NH-48) in Bharuch, Guajarat. The bridge is built by Larsen and Turbo, as a part of the Rs. 379 crore project of the National Highway Authority of India (NHAI).

51. (A) Let their monthly income be ₹ $8x$ and ₹ $5x$.

According to the question

$$\frac{8x-12000}{5x-10000} = \frac{5}{3}$$

$24x - 36000 = 25x - 50000$

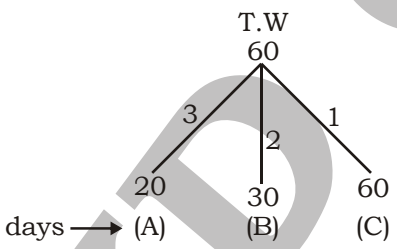
$x = 14000$

Difference in monthly income = $8x - 5x = 3x$

$x = 14000$

$3x = 14000 \times 3 = ₹\ 42{,}000$

52. (C)



In 3 days cycle, total work done = 3 + 3 + 6 = 12 units

Work will be completed in = $\frac{60}{12}$ = 5 cycles

1 cycle → 3 days

5 cycle → 3 × 5 = 15 days

53. (D) 1 sec → 1 drop

Number of second in 300 days

(24 hrs × 60 min × 60 sec) × 300 days

Number of litres wasted = $\frac{300 \times 24 \times 60 \times 60}{6 \times 1000}$ = 4320 litres

54. (B) Speed = 78 km/hr = $\frac{78}{60}$ × 1000 m/min = 1300 m/min

Distance travelled in 1 min = 1300 m

300 = l + 800

l = 500 m

Length of tunnel = 500 m

55. (C) Speed of boat in still water, x = 5 km/hr

Speed of stream, y = 3 km/hr

According to question,

$$\frac{\text{Distance}}{8} + \frac{\text{Distance}}{2} = 3 \text{ hrs}$$

$$\frac{D}{8} + \frac{D}{2} = 3$$

$$\frac{5D}{8} = 3$$

5D = 24

$$D = \frac{24}{5} = 4.8 \text{ km}$$

56. (B) $\tan\theta + \frac{1}{\tan\theta} = 2$

So, $\tan\theta = 1$

$$\tan^2\theta + \frac{1}{\tan^2\theta} = (1)^2 + \frac{1}{(1)^2} = 1 + 1 = 2$$

57. (B) $x^3 = \left(\left(\sqrt{2}+1\right)^{-\frac{1}{3}}\right)^3$

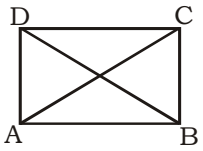
$x^3 = \frac{1}{\sqrt{2}+1}$ and $\frac{1}{x^3} = \sqrt{2} + 1$

Then,

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

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

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

58. (B) 

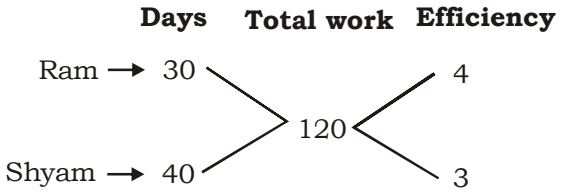
Given :

ABCD is a Rectangle.

Then,

$AB^2 + BC^2 + CD^2 + DA^2 = AC^2 + BD^2$

59. (C)



12.5 days work of Ram = (12.5 × 4) = 50

Remaining work = 120 – 50 = 70

Combined efficiency of Ram and Shyam = (4 + 3) = 7

Time taken by Ram and Shyam to complete 70 works = $\frac{70}{7} = 10$ days

Hence, Shyam worked for 10 days.

60. (C) Work done by both the pipes in 4 min = $4\left(\frac{1}{15}+\frac{1}{10}\right) = \frac{2}{3}$ work

When all the pipes working together, then work done = $\frac{1}{15}+\frac{1}{10}-\frac{1}{5} = \frac{-1}{30}$

$= \frac{-1}{30}$ part of th tank is emptied in 1 min

$\therefore$ $\frac{2}{3}$ of the tank can be emptied in $\frac{2\times 30}{3}$ = 20 min

61. (A) Amount remaining after

1 year = $4000\left(1+\frac{7.5}{100}\right)$ – 1500 = ₹ 2800

2 years = $2800\left(1+\frac{7.5}{100}\right)$ – 1500 = ₹ 1510

3 years = $1510\left(1+\frac{7.5}{100}\right)$ – 1500 = ₹ 123.25

62. (B) Let the total profit be ₹ x.

Then,

40% of x is distributed in the ratio 125000 : 85000 = 25 : 17

Therefore, the share of the first partner = 40% of $x\left(\frac{25}{25+17}\right)$ = 40% of $x\left(\frac{25}{42}\right)$

$= \left(\frac{40x}{100}\right)\left(\frac{25}{42}\right) = \frac{5x}{21}$

And the share of the second partner = 40% of $x\left(\frac{17}{42}\right) = \frac{17x}{105}$

Now, from the question,

The difference in share = $\frac{5x}{21} - \frac{17x}{105} = 300$

$\frac{x(25-17)}{105} = 300$

$\therefore$ x = ₹ 3937.50

63. (A) Let the parts of money invested at 10% and 15% per annum be P_1 and P_2 respectively.

$\frac{P_1 \times 10 \times 1}{100} + \frac{P_2 \times 15 \times 1}{100} = 1900$

$10P_1 + 15P_2 = 19000$

$2P_1 + 3P_2 = 38000$ .....(i)

Also, $\frac{P_1 \times 15 \times 1}{100} + \frac{P_2 \times 10 \times 1}{100} = 2100$

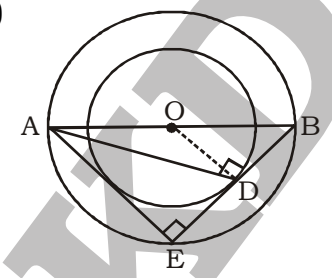
$15P_1 + 10P_2 = 210000$

$3P_1 + 2P_2 = 42000$

On solving Eqs. (i) and (ii), we get

P_2 = ₹ 6000

64. (B)



OD = 8 cm

OB = 13 cm

$BD^2 + OD^2 = OB^2$ [BD is a tangent]

$BD^2 = 13^2 - 8^2 = 169 - 64$

$BD^2 = 105 = DE^2$

$OD \perp BE$ & $AE \perp BE$

OD || AE, also 'O' is the mid point of AB.

$OD = \frac{1}{2}AE$

$8 = \frac{1}{2}AE$

$AE = 16$ cm

In ΔAED,

$AD^2 = AE^2 + DE^2 = 16^2 + 105 = 361$

$AD = 19$ cm

65. (C) $\frac{1}{a}+\frac{1}{b}+\frac{1}{c}=0$

$\frac{ab+bc+ca}{abc}=0$

$ab + bc + ca = 0$

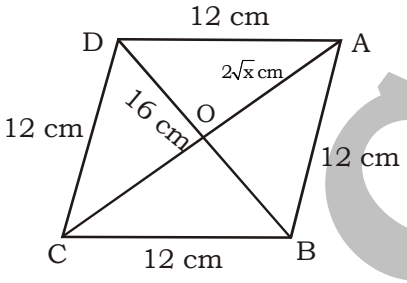
We know, $a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2) - ab - bc - ca$

$32 - 3 \times 8 = 4(a^2 + b^2 + c^2) - (0)$

$8 = 4(a^2 + b^2 + c^2)$

$\therefore \quad a^2 + b^2 + c^2 = \frac{8}{4} = 2$

66. (D)



Side of rhombus = 12 cm

Diagonal BD = 16 cm

$AC = 2\sqrt{x}$ cm

Since, diagonals of rhombus bisects each other at per pendicular.

So,

$BO = \frac{16}{2} = 8$ cm and $OC = \frac{2\sqrt{x}}{2} = \sqrt{x}$ cm

In ΔBOC,

$CD^2 = BO^2 + OC^2$

$12^2 = 8^2 + \left(\sqrt{x}\right)^2$

$x^2 = 144 - 64 = 80$ cm

$\therefore \sqrt{x+20} = \sqrt{80+20} = 10$ cm

67. (D) $\sqrt{25} \div 5 - 16 \div (-64 \div 8) + \sqrt{2601} \div \sqrt{(200+89)} + 2^8 \div 64$

$= \sqrt{25} \div 5 - 16 \div -8 + 51 \div 17 + 256 \div 64$

$= 5 \div 5 - 16 \div -8 + 3 + 4$

$= 1 + 2 + 3 + 4 = 10$

68. (B) Volume of water drawn off cylinder = $\pi r^2 h = \frac{22}{7} \times \frac{42}{2} \times \frac{42}{2} \times h$

ATQ,

$\frac{22}{7} \times 21 \times 21 \times h = 22 \times 1000$

$h = \frac{22 \times 1000 \times 7}{22 \times 21 \times 21} = 15\frac{55}{63}$ cm

69. (A) Let the price of third variety of sugar per kg = ₹ x

ATQ,

$136 \times 2 + 156 \times 2 + 3x = 175 \times 7$

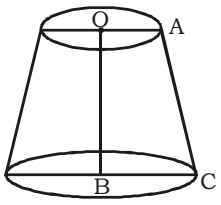
$272 + 312 + 3x = 1225$

$3x = 1225 - 584$

$3x = 641$

$x = \frac{641}{3} = ₹213\frac{2}{3}$

70. (B)



Given that

OA = $\frac{10}{2}$ = 5 cm

BC = $\frac{20}{2}$ = 10 cm

Height, OB = 24 cm

Volume of bucket = $\frac{\pi h}{3}[r^2 + R^2 + rR]$

$= \frac{22}{7} \times \frac{24}{3}[5^2 + 10^2 + 5 \times 10]$

$= \frac{22}{7} \times 8[5^2 + 10^2 + 5 \times 10]$

$= \frac{22}{7} \times 8 \times 175 = 4400$ cm³

71. (B) Profit of the company A in the year 2005 = ₹ 1.84 lakh
In the year 2006, 25% rise in the profit of the company A.
So, the profit of the company A in the year 2006 = 1.84 × 1.25 = ₹ 2.3 lakh

72. (A) According to graph, it is clear that the profit of the companies A and B increased every year.
Minimum profit in the year 2004 and
Maximum profit in the year 2009 by both companies.
Ratio cannot be determined because numerical value are not given.
So, only statement I is true.

73. (D) Required percentage = $\frac{35-20}{20} \times 100\% = 75\%$

74. (C) Profit of company B in the year 2008 = ₹ 4.63 lakh
Profit of company B in the year 2006 = ₹ $4.63 \times \frac{100}{120} \times \frac{100}{125}$ = ₹ 2.42 lakh

75. (D) Required average = $\frac{20+15+25+30+35+30}{6} = \frac{155}{6} = 25\frac{5}{6}\%$

MEANINGS IN ALPHABETICAL ORDER

Obsolete	No longer produced or used; out of date; Archaic	अप्रचलित, पुराना
Liberate	to free	मुक्त करना
Fallacy	a mistaken belief, especially one based on unsound arguments	भ्रांति
Replica	an exact copy or model of something	प्रतिरूप
Daunt	make (someone) feel intimidated or apprehensive	हतोत्साह करना, डराना
Ornate	elaborately or highly decorated	सुशोभित
Anonymous	(of a person) not identified by name; of unknown name	गुमनाम
Biography	an account of someone's life written by someone else	जीवनी
Demagogue	a leader who makes false claims and promises in order to gain power	जनोत्तेजक नेता
Tyrant	a cruel and oppressive ruler	निरंकुश शासक
Obituary	a notice of a death, especially in a newspaper typically including a brief biography of the deceased person	शोक समाचार
Plagiarism	the practice of taking someone else's work or ideas and passing them off as one's own	साहित्यिक चोरी
Conspicuous	attracting notice or attention	विशिष्ट
Conjuror	a performer of clever tricks that seem magic	करतब दिखाने वाला
Voluntary	done, given, or acting of one's own free will	स्वैच्छिक
Homage	special honour or respect shown publicly	श्रद्धांजलि

SSC MOCK TEST - 341 (ANSWER KEY)

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

76. (A) If two articles are used before two ordinals, the noun following must be singular. Change 'episodes' into 'episode'.

77. (C) Change 'some ' into 'somewhat' before 'angry'.

84. (C) 'Get away' means ' to escape'. 'Get away' is followed by 'with'.

85. (C) 'A big draw' means 'a big source of attraction'.

86. (A) Verb 'avoid' takes Gerund after it. Use 'avoid going to....'

87. (B) 'Break into' means ' to enter by force.'

90. (B) The correct spelling of 'Demogogue' is Demagogue, 'Homege' is 'Homage' and 'Obitury' is 'Obituary'.

91. (C) The correct spelling of 'Plegiarism' is 'Plagiarism', 'Conspicous' is 'Conspicuous' and 'Voluntery' is 'Voluntary'.`