

SSC CPO MOCK TEST – 14 (SOLUTION)

1. (A) An optimist is a person whose outlook is cheerful. A pessimist is a person whose outlook is **Gloomy**.

2. (C) Clearly we can observe that
J = 8
K = 7
L = 6
M = 5 ⇒ P N L J = 2468
N = 4 and Q O K L = **1376**
O = 3
P = 2
Q = 1

3. (D) 4 : 20 :: 6 : **42**
 ↓ ↓ ↓
 (4 × 5) (6 × 7)

4. (B) Lira is the currency of turkey and **Rial** is the currency of Iran.

5. (C) $\sqrt[3]{27} = 3$ and $3^2 = 9$
 $\sqrt[3]{64} = 4$ and $4^2 = 16$

6. (D) S U M O P R J L
 ↑ ↑ ↑ ↑ ↑
 +3 +3 +3 +3 +3

T A X I Q X U F
 ↑ ↑ ↑ ↑ ↑
 +3 +3 +3 +3 +3

7. (C) Concord results in Agreement and Discord results in **Conflict**.

8. (A) $\frac{1}{4} : \frac{1}{8} :: \frac{2}{3} : \frac{1}{3}$
 ↓ ↓ ↓
 $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ $\frac{2}{3} \times \frac{1}{2} = \frac{1}{3}$

9. (C) Except RFD, rest of the words contain a vowel in the middle of the word.

10. (B) A D G J I M Q U
 ↑ ↑ ↑ ↑ ↑ ↑
 +3 +3 +4 +4 +4 +4

L O R U W Z C F
 ↑ ↑ ↑ ↑ ↑ ↑
 +3 +3 +3 +3 +3 +3

11. (C) 3 + 6 + 8 + 1 + 2 + 7 = 27
 5 + 6 + 4 + 3 + 2 + 7 = 27
7 + 4 + 2 + 9 + 5 + 6 = 33
 8 + 7 + 6 + 3 + 2 + 1 = 27

12. (C) N K M D A C
 ↑ ↑ ↑ ↑ ↑
 +1 +1 +2 +2 +2

U T V I F H
 ↑ ↑ ↑ ↑ ↑
 -1 +1 +2 +2 +2

13. (D) After dividing the 1st number by second, we will get '9' as remainder in all the three options except (D) i.e. (47, 29)

14. (B) Only Cone is a three dimensional figure.

15. (D) Sum of first three digits is equal to fourth digit.

2 + 5 + 1 = 8
 3 + 2 + 4 = 9
 2 + 7 + 0 = 9
8 + 3 + 1 = 12 ≠ 4

16. (B) Nautical → Naval → Navigate → Necessary
 (3) (4) (2) (1)

17. (A) Word	No. of letters	Result
SUNDAY	6	6 × 3 = 18
MONSOON	7	7 × 3 = 21
YEAR	4	4 × 3 = 12
THURSDAY	8	8 × 3 = 24

18. (C) The word 'GRAPHIC' can't be formed as letter 'C' is not present in AUTOBIOGRAPHY.

19. (C) As we can observe that 3 is common in both dice. So,

Digit on top	Digit on bottom
3	2
1	6
5	4

Now, we can clearly say that the no. at the bottom is 4, when 5 is at top.

20. (D) We have,

$$30\left(H - \frac{M}{5}\right) + \frac{M}{2} \text{ degree}$$

$$= 30\left(6 - \frac{30}{5}\right) + \frac{30}{2} \text{ degree}$$

$$= 30 \times 0 + 15 \text{ degree}$$

$$= 15^\circ$$

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21. (C) $1 + 4 + 7 + 4 = 16 \Rightarrow \sqrt{16} = 4$
 $4 + 1 + 3 + 1 = 9 \Rightarrow \sqrt{9} = 3$
 $5 + 6 + 8 + 6 = 25 \Rightarrow \sqrt{25} = 5$

22. (B) $4 \xrightarrow{\times 2} 8 \xrightarrow{\times 2} 16 \xrightarrow{\times 2} 32$
 $5 \xrightarrow{\times 3} 15 \xrightarrow{\times 3} 45 \xrightarrow{\times 3} 135$
 $6 \xrightarrow{\times 4} 24 \xrightarrow{\times 4} 96 \xrightarrow{\times 4} 384$

23. (D) $(9 \times 5) + (4 \times 8) = 45 + 32 = 77$
 $(9 \times 6) + (3 \times 7) = 54 + 21 = 75$
 24. (C) $8 + 7 = 15 \Rightarrow 15^2 = 225$
 $3 + 4 = 7 \Rightarrow 7^2 = 49$
 $6 + 5 = 11 \Rightarrow 11^2 = 121$

25. (A)
$$\begin{array}{r} 1 \quad 3 \quad 5 \\ 2 \quad 4 \quad 6 \\ 3 \quad 1 \quad 9 \\ + 1 \quad 7 \quad 4 \\ \hline 8 \quad 7 \quad 4 \end{array}$$

26. (B) 7

27. (C)
$$\begin{array}{cccccc} F & R & I & E & N & D \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 6 & 18 & 9 & 5 & 14 & 4 \\ \hline & & & & & 56 \end{array}$$

$$\begin{array}{cccccc} E & N & E & M & Y \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 5 & 14 & 5 & 13 & 25 \\ \hline & & & & 62 \end{array}$$

28. (C) 18th February 1999 was Friday as no. of odd days here is 2.

29. (C) Given : $27 \times 3 \div 6 + 9 - 8$
 After changing the signs, we have
 $27 \div 3 - 6 \times 9 + 8$
 $= 9 - 54 + 8$
 $= -37$

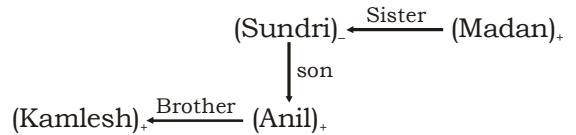
30. (C) $720 \xrightarrow{\div 4} 180 \xrightarrow{-4} 176 \xrightarrow{\div 4} 44 \xrightarrow{-4} 40 \xrightarrow{\div 4} 10 \xrightarrow{-4} 6 \xrightarrow{\div 4} 1.5$

31. (B)
$$\begin{array}{cccccc} 1 & 16 & 81 & 256 & 625 & 1296 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 1^4 & 2^4 & 3^4 & 4^4 & 5^4 & 6^4 \end{array}$$

32. (B)
$$\begin{array}{cccccccc} 4 & 11 & 17 & 22 & 26 & 29 & 31 & 32 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +7 & +6 & +5 & +4 & +3 & +2 & +1 & \\ \hline & & & & & & & \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ -1 & -1 & -1 & -1 & -1 & -1 & -1 & \end{array}$$

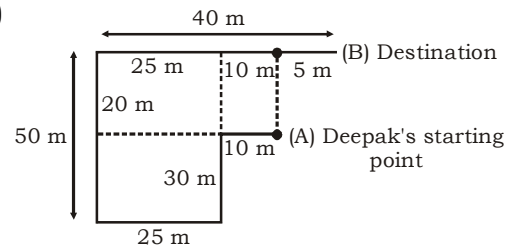
33. (C) Opposite face have the same colour and there are six faces in a cube. So, we need 3 different colours to do the needful.

34. (B) The family tree is shown below:-



Hence, Kamlesh is the son of Sundri

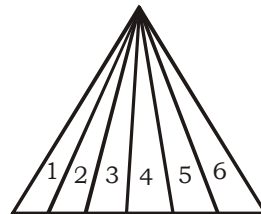
35. (C)



Here A is Deepak's starting point and B is his destination, where he reached finally. So we can say that Deepak is now in **north-east** direction from the starting point.

36. (B)

37. (C)



Here no. of triangles = $\frac{n(n+1)}{2} = \frac{6(6+1)}{2}$
 $= \frac{6 \times 7}{2} = 21$

38. (B) We should start counting the number of odd days from 2007 onwards to get the sum equal to 0(zero) or one of the factor of 7.

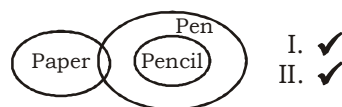
We have,

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Odd days	1	2	1	1	1	2	1	1	1	2	1

Now, we have the sum of odd days = 14 odd days
 $= 0$ odd days

So, calendar for year 2018 will be same as 2007.

39. (C) Both I and II follows.



- I. ✓
- II. ✓

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40. (C)
41. (C) m b b m/ a a/ m b b m/ a a/ m b b m
42. (D) r/ q p x x r/ q p x x r/ q p x x r/ q p x x
43. (A) The word is HISTORY and the code is 6742153.
- | | | | | | | |
|---|---|---|---|---|---|---|
| H | I | S | T | O | R | Y |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 6 | 7 | 4 | 2 | 1 | 5 | 3 |
44. (A)
- | | | | | | |
|---|-------------|----------|------------|-------|----------|
| AFGHAN | INDEFINITLY | SYNOPSIS | STUPENDOUS | BURST | HLJACKER |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| Three consecutive alphabets in every word | | | | | |
45. (C) Current age of mother, daughter and son = 87
After 8 years their age = $87 + (3 \times 8)$
 $= 87 + 24$
 $= 111$
46. (A)
47. (B)
48. (D)
49. (A)
50. (D)
51. (C) Hunter commission:- In 1882, Lord Ripon organized the Hunter Commission under William Wilson Hunter.
Wardhascheme :-On July 31, 1937, Gandhi had published an article in the Harijan. Based upon this article, an all India National Education Conference was held on October 22 and 23, 1937. The conference is called Wardha Educational Conference and the president of this conference was Gandhi himself.
Indain University Act :- The recommendation of Indian Universities Commission appeared after slight amendments in the shape of Indian Universities Act, which came into force on March, 1904.
Radhakrishnan commission:- The Government of India appointed a university Education Commission under the chairmanship of Dr.Radhakrishnan in November 1948.
52. (A) Indian Women's Press Corps (IWPC) is a reputed association of women journalists. It was launched in 1994. Senior journalist T K Rajalakshmi was elected as the new president of the Indian Women's Press Corps (IWPC), while Jyoti Malhotra and Shobhna Jain were declared vice-presidents of the media body.
53. (C) IDBI is an Indian government-owned financial service company, formerly known as Industrial Development Bank of India, headquartered in Mumbai, India. It was established in 1964 by an Act of Parliament to provide credit and other financial facilities for the development of the fledgling
- Indian industry.
57. (A) Sharana Basaveshwara Temple is a shrine at Kalburgi (Gulbarga), an ancient town in the north-eastern part of Karnataka.
59. (C) Biochemical oxygen demand (BOD) (also called biological oxygen demand) is the amount of dissolved oxygen needed (i.e., demanded) by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period.
61. (A) Madhubani painting or Mithila painting is a style of Indian painting, practiced in the Mithila region of Bihar state, India and the adjoining parts of Terai in Nepal. Painting is done with fingers, twigs, brushes, nib-pens, and matchsticks, using natural dyes and pigments, and is characterized by eye-catching geometrical patterns. There are paintings for each occasion and festival such as birth, marriage, holi, suryashasti, kali puja, Upanayanam (sacred thread ceremony), and durga puja.
62. (D) 1. USA
Reserves: 237,295 million tons
Percent of world total: 27.6
Annual production: 556.8 million tons of oil equivalent
Annual consumption: 501.9 million tons of oil equivalent
2. Russia
Reserves: 157,010 million tons
Percent of world total: 18.2
Annual production: 157.3 tons of oil equivalent
Annual consumption: 90.9 tons of oil equivalent
3. China:
Reserves: 114,500 million tons
Percent of world total: 13.3
Annual production: 1,956 million tons of oil equivalent
Annual consumption: 1,839.4 million tons of oil equivalent
4. Australia:
Reserves: 76,400 million tons
Percent of world total: 8.9
Annual production: 230.8 million tons of oil equivalent
Annual consumption: 49.8 million tons of oil equivalent
5. India
Reserves: 60,600 million tons
Percent of world total: 7
Annual production: 222.4 million tons of oil equivalent
Annual consumption: 295.6 million tons of



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- oil equivalent.
63. (D) *Pythiumdebaryanum* is a species of water mould in the family Pythiaceae. It is known as a plant pathogen on many kinds of wild and cultivated plants, including peanut, beet, eucalyptus, tobacco, and pine trees. The plants develop damping off, a disease state.
65. (C) The Sixty-first Amendment of the Constitution of India, officially known as The Constitution (Sixty-first Amendment) Act, 1988, lowered the voting age of elections to the Lok Sabha and to the Legislative Assemblies of States from 21 years to 18 years.
67. (C) The term "ecosystem" was first coined by Roy Clapham in 1930, but it was ecologist Arthur Tansley who fully defined the ecosystem concept.
68. (B) Barter is a system of exchange where goods or services are directly exchanged for other goods or services without using a medium of exchange, such as money.
69. (A) The dugong is a medium-sized marine mammal. It is one of four living species of the order Sirenia, which also includes three species of manatees.
70. (C) Engel's law is an observation in economics stating that as income rises, the proportion of income spent on food falls, even if actual expenditure on food rises. In other words, the income elasticity of demand of food is between 0 and 1. The law was named after the statistician Ernst Engel (1821-1896).
71. (A) Adhai Din Ka Jhonpra is a mosque in the Ajmer city of Rajasthan, India. It was commissioned by Qutb-ud-Din-Aibak, on orders of Muhammad Ghori, in 1192 CE.
73. (C) The break-even point (BEP) in economics, business, and specifically cost accounting, is the point at which total cost and total revenue are equal: there is no net loss or gain, and one has "broken even."
75. (A) The principles of neutrality and impartiality have often been interlinked but they do have different meanings and significance. Neutrality usually means not taking sides with warring parties and impartiality refers to non-discrimination and proportionality. (Weiss, 1999) Neutrality is often associated with passivity and inaction. (Donald, 2002, Thakur, 1998) The principles of neutrality and impartiality have traditionally been regarded as essential for UN peacekeeping operations.
76. (B) The Large Hadron Collider (LHC) is the world's largest and most powerful particle collider, the largest, most complex experimental facility ever built, and the largest single machine in the world. It was built by the European Organization for Nuclear Research (CERN) between 1998 and 2008.
77. (A) A type 3 poliovirus capsid coloured by chains. Poliovirus, the causative agent of poliomyelitis (commonly known as polio), is a human enterovirus and member of the family of Picornaviridae.
80. (C) The International Solar Alliance (ISA) is an alliance of more than 121 countries. The primary objective of the alliance is to work for efficient exploitation of solar energy to reduce dependence on fossil fuels. The United Kingdom has recently become the signatory member of International solar Alliance. With this, UK became the 62nd signatory member of the ISA.
81. (C) According to the law of conservation of momentum,
 $m \times a + M \times o = (m + M) V$
 $\Rightarrow V = \frac{ma}{m + M}$
82. (A) Guttation: In spite of water being an essential component of plant cells, instead of conserving, they lose water from their surfaces. By doing so they themselves get into peril.
84. (C) The Indian Institute of Technology (IIT) Delhi has installed India's first 5G radio laboratory with the Massive Multiple-Input Multiple-Output (MIMO) technology at the Bharti School of Telecommunication Technology and Management campus.
86. (A) A type of physical memory used in most personal computers. The term dynamic indicates that the memory must be constantly refreshed (reenergized) or it will lose its contents. RAM (random-access memory) is sometimes referred to as DRAM to distinguish it from static RAM (SRAM).
88. (D) Dark fermentation is the fermentative conversion of organic substances to bio hydrogen. It is a complex process manifested by diverse groups of bacteria, involving a series of biochemical reactions using three steps similar to anaerobic conversion.
90. (A) There are six main organs of the United Nations-the General Assembly, the Security Council, the Trusteeship Council, the Economic and Social Council, the International Court of Justice, and the Secretariat.
92. (B) The Ezra Cup is a popular polo tournament conducted annually in India.

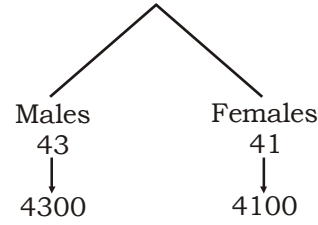
The Calcutta Polo Club runs this oldest and first ever Polo Trophy. The first Ezra Cup was held in 1880.

96. (C) Pyrometallurgy is a branch of extractive metallurgy. It consists of the thermal treatment of minerals and metallurgical ores and concentrates to bring about physical and chemical transformations in the materials to enable recovery of valuable metals. Pyrometallurgical treatment may produce products able to be sold such as pure metals, or intermediate compounds or alloys, suitable as feed for further processing. Examples of elements extracted by pyrometallurgical processes include the oxides of less reactive elements like Fe, Cu, Zn, Chromium, Tin, Manganese.

97. (D) As per world Bank's report "Migration and Development Brief," India has retained top position as recipient of remittances in 2017. The rebound in global remittances was due to higher oil prices and strengthening of Euro and Ruble.

100. (A) The coastal security exercise 'sagar Kavach' has recently held in Kerala. The objective of the exercise was to provide seamless seaward cover along coast by all concerned security agencies from coastal belt area to limit of territorial waters i.e. 12 nautical miles.

101. (B) Total population → 8400



Total no. of males (literate) = 3440
 Total no. of females (literate) = 2460

∴ Required% = $\frac{5900}{8400} \times 100 = 70\frac{5}{21}\%$

102. (A) Let the required no. men be x .
 $16 \times 10 = x \times 40$
 $x = 4$ men

103. (B) Let the age of P and Q be $5x$ and $7x$ yrs.
 ATQ, $2x - 6 = 2$, $x = 4$
 ∴ Required sum = $5x + 7x$
 = $12 \times 4 = 48$ years

104. (B) Amount of each installation

$$\Rightarrow \frac{x \times 100}{100 \times t + \{(t-1) + (t-2) + \dots\}r}$$

$$\Rightarrow \frac{1888 \times 100}{100 \times 4 + \{(4-1) + (4-2) + (4-3) + (4-4)\}12}$$

$$\Rightarrow \frac{1888 \times 100}{(400 + 72)} \Rightarrow ₹ 400$$

105. (B) LCM of 3, 4, 5, 6, 7, 8 = 840
 $840 \mid 10000 \quad (11)$

$$\begin{array}{r} 840 \\ 1600 \\ \hline 840 \\ 760 \end{array}$$

Since, the remainder 760 is more than half of the divisor 840.

∴ The nearest number
 = $10000 + (840 - 760) = 10080$

106. (D) Expression

$$= \frac{\frac{5}{4} \div \frac{3}{2}}{\left(\frac{2+30-27}{30}\right)} = \frac{\frac{5}{4} \times \frac{2}{3}}{\frac{5}{30}} = \frac{5}{6} \times \frac{30}{5} = 5$$

107. (B) Given:
 $x + y = 2xy$... (i)
 $x - y = 4xy$... (ii)
 On adding (i) and (ii)
 $2x = 6xy$
 $y = \frac{1}{3}$ then $y^2 = \frac{1}{9}$

108. (B) Let the barrel contain 4 litres of mixture.
 ∴ Wine = 3 litres
 Water = 1 litre
 Let x litre mixture is taken out.

∴ Wine in $(4 - x)$ litres mixture = $\frac{3}{4}(4 - x)$

On adding x litres water, water in mixture

$$= (4 - x) \times \frac{1}{4} + x$$

$$= 1 - \frac{x}{4} + x$$

$$= \frac{4 - x + 4x}{4} = \frac{4 + 3x}{4}$$

∴ $\frac{3}{4}(4 - x) = \frac{4 + 3x}{4}$

$$\Rightarrow 3 - \frac{3x}{4} = 1 + \frac{3x}{4}$$

$$\Rightarrow 2 = \frac{6x}{4}$$

$$\Rightarrow x = \frac{2 \times 4}{6} = \frac{4}{3}$$

∴ Required answer

$$= \frac{\frac{4}{3}}{4} = \frac{1}{3}$$

109. (D) Formula for difference between S.I & C.I

$$P = \frac{d \times (100)^2}{r^2}$$

$$2900 = \frac{10.44 \times 100 \times 100}{r^2}$$

$$r^2 = \frac{10.44 \times 100 \times 100}{2900}$$

$$r^2 = 36, r = 6\%$$

110. (D) In $\triangle ABC$

$$\tan 30^\circ = \frac{BC}{AB}$$

$$\frac{1}{\sqrt{3}} = \frac{2\sqrt{3}}{AB} \Rightarrow AB = 6 \text{ cm}$$

In $\triangle AEB$, ($90^\circ + 30^\circ + \angle ABE = 180^\circ$)

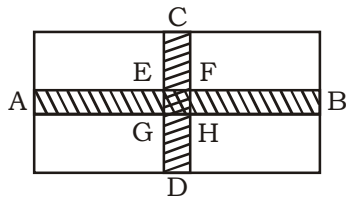
$$\Rightarrow \angle ABE = \angle ABD = 60^\circ$$

In $\triangle ABD$

$$\tan 60^\circ = \frac{AD}{AB}$$

$$\sqrt{3} = \frac{AD}{6} \Rightarrow AD = 6\sqrt{3} \text{ cm}$$

111. (C)



$$\text{Area of road AB} = 500 \times 10 = 5000 \text{ m}^2$$

$$\text{Area of road CD} = 400 \times 10 = 4000 \text{ m}^2$$

$$\text{Area of EFGH} = 10 \times 10 = 100 \text{ m}^2$$

Hence area of both roads

$$= 5000 + 4000 - 100$$

$$= 8900 \text{ m}^2$$

112. (D) ∴ 60% → 180

$$1\% \rightarrow 3$$

$$\therefore 100\% \rightarrow 300 \text{ marks}$$

113. (D) A 20 5

$$\begin{array}{ccc} & & 100 \\ B & 25 & 4 \times 5 = 20 \end{array}$$

$$\Rightarrow \text{Required time} = \frac{100 + 20}{5 + 4} = \frac{120}{9} = \frac{40}{3}$$

$$= 13 \frac{1}{3} \text{ min}$$

114. (D) Total cost price for 150 toys

$$= 150 \times 250 + 2500 = ₹ 40,000$$

Cost price for each article = 266.66

also, he gives 5% discount on M.P.

$$= 320 \times \frac{5}{100} = ₹ 16$$

$$\therefore \text{Required \%} = \frac{37.34}{266.66} \times 100 = 14\%$$

115. (A) A : B = 3 : 7

$$B : C = 6 : 5$$

$$A : B : C = 3 \times 6 : 7 \times 6 : 7 \times 5$$

$$= 18 : 42 : 35$$

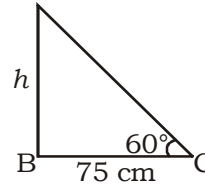
Sum of the ratios

$$= 18 + 42 + 35 = 95$$

∴ B's share

$$= ₹ \left(\frac{42}{95} \times 33630 \right) = ₹ 14868$$

116. (A) A



Let the tree breaks at height h

$$\tan 60^\circ = \frac{h}{75}$$

$$h = 75\sqrt{3} \text{ cm}$$

$$\sin 60^\circ = \frac{h}{AC}$$

$$AC = \frac{75\sqrt{3}}{\sqrt{3}} \times 2 = 150 \text{ cm}$$

Total length = AB + AC

$$= 75\sqrt{3} + 150 \text{ cm}$$

$$= 75(\sqrt{3} + 2) \text{ cm}$$

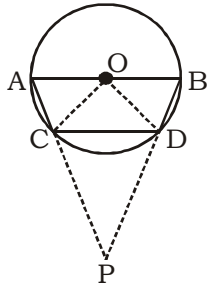
117. (B) $d = \sqrt{2 \times \text{area}} = \sqrt{2 \times 24200} = \sqrt{48400}$

$$= 220 \text{ m}$$

The time taken to cross a length of 220 meters while travelling at 6.6 km/h is given

$$\text{by } \frac{220 \text{ m}}{6.6 \text{ km/h}} = \frac{220 \times 60}{6.6 \times 1000} = 2 \text{ min}$$

118. (A)



In $\triangle OCD$
 $OC = CD = OD$
 So, $\angle COD = 60^\circ$
 Similarly in $\triangle OAC$ and $\triangle OBD$
 $\angle CAO = \angle AOC = 60^\circ$
 and $\angle OBD = 60^\circ$
 $\angle APB = 180^\circ - \angle PAB - \angle PBO = 60^\circ$

119. (A)

Vivek	Ashutosh	Nitya	Apurva
3×5	2×5		
	5×2	6×2	
		4×3	3×3
15	10	12	9
$\downarrow \times 100$			$\downarrow \times 100$
1500			900

120. (D) $A \rightarrow 120$ \rightarrow 5
 $B \rightarrow 150$ \rightarrow 4
 (A bracket connects the 5 and 4, with 600 written above it.)

After 20 days, remaining work = 420 units
 Alone A worked on it for 12 days = 60 units done
 \therefore Remaining work after 32 days = 360
 It means 360 unit work is done by A + C in

48 days = $\frac{360}{48} = 7.5$ units/day
 Efficiency of C = 2.5 units/day
 \therefore Required time = $\frac{600}{2.5} = 240$ days

121. (D) $15 + 9 = 24$ minutes

\therefore $5 \rightarrow 3$ \rightarrow 15
 $3 \rightarrow 5$ \rightarrow 5
 (A bracket connects the 15 and 5, with 2 hrs written above it.)
 \downarrow given
 24 minutes

\therefore Required distance = $\frac{24}{120} \times 15 = 3$ kms

122. (A) $1000 = (45 \times 22) + 10$
 $\therefore 45 - 10 = 35$ to be added.
 So, the smallest number to be added to 1000 to make the sum exactly divisible by 45 is 35.

123. (A) $A + B = ₹ 28,000$... (i)
 $B + C = ₹ 31,200$... (ii)
 $C + A = 28,800$... (iii)

Adding,
 $2(A + B + C) = 88000$
 $\Rightarrow A + B + C = 44000$
 From equation (i),
 $28000 + C = 44000$
 $\Rightarrow C = 44000 - 28000$
 $= ₹ 16000$

124. (A) Given :

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

$$\Rightarrow x = 1 \text{ satisfies}$$

$$\text{so, } 8(1)^{10} + \frac{4}{(1)^5} = 8 + 4 = 12$$

125. (D) Let number of balls = n
 Volume of n balls = Volume of cone

$$n \times \frac{4}{3} \pi r^3 = \frac{1}{3} \pi R^3 h$$

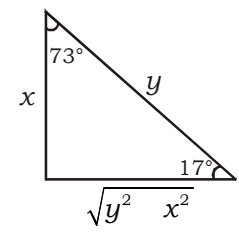
$$n \times \frac{4}{3} (2)^3 = \frac{1}{3} \times (20)^2 \times 10$$

$$n = 125$$

126. (A) Surface area of cylinder = surface area of square
 $2\pi rh = a^2$
 Height of cylinder = side of square
 $2\pi ra = a^2$
 $\Rightarrow a = 2\pi r$

$$\Rightarrow \frac{r}{a} = \frac{1}{2\pi} = 1 : 2\pi$$

127. (D) $\sin 17^\circ = \frac{x}{y}$



$$\sec 17^\circ - \sin 73^\circ$$

$$= \frac{y}{\sqrt{y^2 - x^2}} - \frac{\sqrt{y^2 - x^2}}{y}$$

$$= \frac{y^2 - (y^2 - x^2)}{y\sqrt{y^2 - x^2}} = \frac{x^2}{y\sqrt{y^2 - x^2}}$$

128. (A) $10\% = \frac{1}{10}$, $25\% = \frac{1}{4}$, $5\% = \frac{1}{20}$

Present	Increase/ Decrease
10	11
4	3
20	21
-----	-----
800	693
↓ ×80	↓ ×80
64000	55440

129. (A) A + B + C one day earning = ₹ 300
 A + B one day earning = ₹ 200
 B + C one day earning = ₹ 200
 ∴ one day earning of B = ₹ 100

130. (D) Let the initial speed of bus be x kms/h
 Distance = 700 kms
 New speed = (x - 20) kms/h
 ATQ,

$$\frac{700}{(x-20)} - \frac{700}{x} = 4$$

$x = 70$ kms/h

131. (C) Let the M.P be ₹ 100
 ATQ,

∴ C.P. = $100 \times \frac{3}{4} = ₹ 75$

He sold it for ₹ 150

∴ Required profit % = $\frac{75}{75} \times 100 = 100\%$

132. (B) Train travels 300 m in 15 seconds
 ∴ In 25 seconds distance travel by train

= $\frac{300}{15} \times 25 = 500$ m

∴ Length of train = 500 - 300 = 200 m
 ∴ Required time to cross platform

= $\frac{400}{20} = 20$ sec

133. (B) $20 = \frac{1}{5}$, $25\% = \frac{1}{4}$

5	—	6
4	—	5
20	30	
↓ ×7.5	↓ ×7.5	
₹ 150	225	

134. (B) Let the third number be x.
 ∴ Second number = 3x
 and first number = 6x
 ∴ $6x + 3x + x = 3 \times 20$

$\Rightarrow 10x = 60 \Rightarrow x = 6$
 ∴ Required sum = $6x + x = 7x$
 = $7 \times 6 = 42$

135. (D) $x = \frac{4ab}{a+b}$

$\frac{x}{2a} = \frac{2b}{a+b}$

$\Rightarrow \frac{x+2a}{x-2a} = \frac{3b+a}{b-a}$... (i)

Similarly,

$\Rightarrow \frac{x+2b}{x-2b} = \frac{3a+b}{a-b}$... (ii)

adding (i) and (ii)

$$\frac{x+2a}{x-2a} + \frac{x+2b}{x-2b} = \frac{3b+a}{b-a} + \frac{3a+b}{a-b}$$

$$= \frac{3b+a-3a-b}{b-a} = \frac{2b-2a}{b-a} = 2$$

136. (D) Given:

$ax + by = 6$

squaring both the sides:

$\Rightarrow a^2x^2 + b^2y^2 + 2abxy = 36$... (i)

and $(bx - ay)^2 = (2)^2$

Squaring both sides

$b^2x^2 + a^2y^2 - 2abxy = 4$... (ii)

adding (i) and (ii)

$a^2x^2 + b^2y^2 + 2abxy + b^2x^2 + a^2y^2 - 2abxy = 40$
 $\Rightarrow x^2(a^2 + b^2) + y^2(a^2 + b^2) = 40$
 $\Rightarrow (x^2 + y^2)(a^2 + b^2) = 40$
 and $x^2 + y^2 = 4$
 (given)

so, $a^2 + b^2 = \frac{40}{4}$

$a^2 + b^2 = 10$

137. (A) Maximum value of

$\sin\left(x + \frac{\pi}{6}\right) + \cos\left(x + \frac{\pi}{6}\right)$

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

138. (D) Given:

$x^4 + \frac{1}{x^4} = 23$

or $\Rightarrow \left(x^2 + \frac{1}{x^2}\right)^2 = 23 + 2$

$\Rightarrow x^2 + \frac{1}{x^2} = \sqrt{25} = 5$

$$\Rightarrow \left(x - \frac{1}{x}\right)^2 = 5 - 2$$

$$\Rightarrow \left(x - \frac{1}{x}\right)^2 = 3$$

139. (A) $\frac{\cos 60^\circ \cdot \cos 20^\circ}{2} [2 \cos 80^\circ \cdot \cos 40^\circ]$

$$\frac{\cos 60^\circ \cdot \cos 20^\circ}{2} [\cos 120^\circ + \cos 40^\circ]$$

$$\frac{1}{4} \cos 20^\circ \left[-\frac{1}{2} + \cos 2 \times 20\right]$$

$$\frac{1}{4} \cos 20^\circ \left[-\frac{1}{2} + 2 \cos^2 20 - 1\right]$$

$$\frac{1}{4} \cos 20^\circ \left[-\frac{3}{2} + 2 \cos^2 20\right]$$

$$\frac{1}{8} [4 \cos^3 20 - 3 \cos 20]$$

$$\frac{1}{8} \cos 3 \times 20$$

$$\Rightarrow \frac{1}{16}$$

140. (B) $\sin \theta + \cos \theta = p$
 $\sec \theta + \operatorname{cosec} \theta = q$

$$\frac{\sin \theta + \cos \theta}{\sin \theta \cos \theta} = q$$

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

$$= \frac{p}{\sin \theta \cos \theta} [\sin^2 \theta + \cos^2 \theta + 2 \sin \theta \cdot \cos \theta - 1]$$

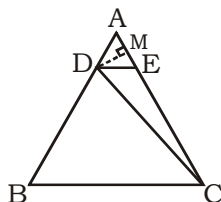
$$= \frac{p}{\sin \theta \cos \theta} \times 2 \sin \theta \cos \theta = 2p$$

141. (A) $l \times b = 6$, $l \times h = 15$, $b \times h = 10$

$$l^2 b^2 h^2 = 6 \times 15 \times 10$$

$$l \times b \times h = 30$$

142. (C) Let $\triangle ADE \sim \triangle ABC$



$$\Rightarrow \frac{DE}{BC} = \frac{AE}{AC}$$

$$\Rightarrow \frac{1}{4} = \frac{AE}{AC}$$

$$\left[\because \frac{DE}{BC} = \frac{1}{4} \right]$$

$$\Rightarrow \frac{AE}{CE} = \frac{1}{3}$$

Now draw $DM \perp AC$

$$\frac{\text{ar} \cdot (\triangle ADE)}{\text{ar} \cdot (\triangle DEC)} = \frac{\frac{1}{2} \times DM \times AE}{\frac{1}{2} \times DM \times CE}$$

$$\frac{10}{\text{ar} \cdot (\triangle DEC)} = \frac{AE}{CE} = \frac{1}{3}$$

$$\Rightarrow \text{ar} \cdot (\triangle DEC) = 30 \text{ sq. unit}$$

143. (B) Let sides be $4x$, $5x$, $6x$

$$\text{in radius} = \frac{\Delta}{S}$$

$$S = \frac{4x + 5x + 6x}{2} = \frac{15x}{2}$$

$$\Rightarrow 4 = \frac{\Delta}{\frac{15}{2}x}$$

$$\Rightarrow \Delta = 30x$$

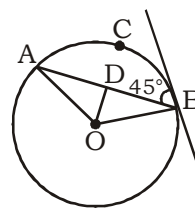
Smallest altitude will be on the longest side

$$\text{Area of } \Delta = \frac{1}{2} \times h \times 6x$$

$$\Rightarrow 30x = \frac{1}{2} \times h \times 6x$$

$$\Rightarrow h = 10 \text{ cm}$$

144. (C)



$$\angle ABC = 45^\circ$$

$$\angle ABO = 45^\circ$$

$$BD = 3 \text{ cms}$$

$$\cos 45^\circ = \frac{BD}{OB}$$

$$\cos 45^\circ = \frac{3}{OB}$$

$$\frac{1}{\sqrt{2}} = \frac{3}{OB}$$

$$OB = 3\sqrt{2} \text{ cms}$$



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145. (A) Area = Base × Height = $7.5 \times 10 = 75 \text{ cm}^2$
 Again,

$$\text{Area} = \frac{1}{2} d_1 \times d_2$$

$$\Rightarrow 75 = \frac{1}{2} \times 30 \times d_2$$

$$\Rightarrow d_2 = 5 \text{ cms}$$

146. (C) Sale of A = $170000 \times \frac{29}{100} \times \frac{8}{17} = 23200$;
 Sale of B = $170000 \times \frac{18}{100} \times \frac{7}{18} = 11900$;
 Sale of C = $170000 \times \frac{14}{100} \times \frac{4}{7} = 13600$;
 Total sale = 48700

147. (B) $\frac{8-5}{13} \times \frac{13}{100} \times 170000 = 5100$

148. (B) ratio = $\frac{[(170000) \times \frac{16}{100} \times \frac{9}{16}]}{[(170000) \times \frac{10}{100} \times \frac{3}{5}]} = 3 : 2$

149. (C)

150. (B) Difference A = $[(170000) \times \frac{29}{100} \times \frac{1}{17}]$
 = 2900 ;
 Difference B = $[(170000) \times \frac{18}{100} \times \frac{4}{18}] = 6800$;
 Difference C = $[(170000) \times \frac{14}{100} \times \frac{3-4}{16}] = -3400$;
 Difference D = $[(170000) \times \frac{13}{100} \times \frac{3}{13}] = 5100$;
 Difference E = $[(170000) \times \frac{16}{100} \times \frac{7-9}{16}] = -3400$

$$\text{Difference} = [(170000) \times \frac{10}{100} \times \frac{1}{5}] = 3400$$

$$\text{Difference} = 2900 + 6800 - 3400 + 5100 - 3400 + 3400 = 11400$$

D1		D2		D3		D4		D5	
M	F	M	F	M	F	M	F	M	F
450	312	210	180	120	90	315	210	405	408

151. (C) 'Prosecuted' is an appropriate word, to replace 'persecuted'.
152. (C) When one is chosen out of two, we use a comparative degree preceded by 'the'. Thus, Add 'more' before 'expensive'.
153. (B) 'Forbade' doesn't take 'not' after it. Remove 'not'.
154. (C) In such sentences, 'if clause' remains in simple present tense and 'the main clause' in simple future tense. Change 'Harish will stand' into 'Harish stands.'
155. (B) Sentence starting with 'it is high time' is always followed by simple past tense. Thus, replace 'send' by 'sent'.
158. (B) 'cut down on something' means 'to reduce the amount or number of something'. Here, 'he is trying to **cut down**' means 'to smoke fewer'.
176. (B) Here, 'The three Musketeers' is a book, and hence a singular noun. Thus, it must be followed by singular verb i.e, 'has'.
179. (C) When two sentences are combined with 'since' and the first sentence is in present perfect tense, the sentence after 'since' must be in simple past tense.
181. (D) Since, the sentence is in past form of simple present it should be in simple past.
182. (A) As there are two sentences and the 2nd one has to be contradictory to the 1st one, 'rather' would be an appropriate word.

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Arena	A level area surrounded by seats for spectators, in which sports, entertainments, and other public events are held.	खेल का मैदान
Bigotry	The state of feeling or the act of expressing, strong, unreasonable beliefs or opinions.	कट्टर पंथी
Cite	Quote something as evidence for or justification of an argument or statement.	उद्धरण देना
Clandestine	Kept secret or done secretly	गुप्त
Concubine	A woman who lives with a man but who is not his wife	किसी पुरुष के साथ रह रही औरत जो पत्नी नहीं हो।
Contrite	Feeling or expressing remorse or penitence; affected by guilt.	पश्चाताप, पछतावा
Credible	Able to be believed; convincing.	विश्वसनीय
Credulous	Having or showing too great a readiness to believe things	बहुत जल्दी भरोसा करने वाला
Dandy	A man who cares a lot about his clothes and appearance	वह जो अपने पहनावे एवं बाहरी सुंदरता पर अत्यधिक ध्यान देता हो
Deny	State that one refuses to admit the truth or existence of.	किसी बात का खंडन करना
Dictate	Lay down authoritatively; prescribe.	आज्ञा देना
Exploit	To gain an advantage of a situation	लाभ उठाना
Fallacy	A mistaken belief, especially one based on unsound argument.	भ्रान्ति, गलत धारणा
Gripping	(of an emotion or a situation) to have a powerful effect on somebody/something.	जबरदस्त प्रभाव होना।
Gullible	Easily persuaded to believe something	आसानी से धोखा खाने वाला
Hangar	A large building where aircrafts are kept	विमान घर
Hazard	A danger or risk	जोखिम, संकट
Heinous	Morally very bad	नृशंस, जघन्य
Hideous	Ugly or disgusting to look at	भयंकर, घिनौना
Hypocrite	A person who indulges in hypocrisy.	ढोंगी
Intercede	Intervene on behalf of another.	बीच-बचाव करना
Malevolence	The state or condition of having a wish to do evil to others.	द्वेष
Masochism	The enjoyment of something that most people would find unpleasant or painful.	भयावह चीजों से आनंद प्राप्त करने की क्रिया
Overwhelm	To defeat somebody completely, overpower	हराना
Pensive	Engaged in, involving, or reflecting deep or serious thought.	चिंताग्रस्त
Persecute	Subject (someone) to hostility and ill-treatment, especially because of their race or political or religious beliefs.	कष्ट देना, सताना
Prosecute	Institute legal proceedings against (a person or organization).	मुकदमा करना
Pungent	Having a sharply strong taste or smell	तीक्ष्ण, तीखा
Rebuff	Reject (someone or something) in an abrupt or ungracious manner.	झिड़कना, दुतकारना
Refuse	Indicate or show that one is not willing to do something.	मना करना, अस्वीकार करना
Respite	A short period of rest or relief from something	विराम, राहत
Retaliation	A violent or aggressive act towards somebody in return of the same.	प्रतिशोध, बदला
Sanatorium	A place like a hospital where patients who have a lasting illness or who are getting better after an illness are treated.	आरोग्याश्रम
Shallow	Of little depth	छिछला, सतही
Tempo	The rate or speed of motion or activity; pace.	गति
Truant	A person who stays away from work without leave or explanation.	वह जो अपने कार्य से बिना पूर्व आज्ञा के अनुपस्थित होता हो
Velodrome	A cycle-racing track, typically with steeply banked curves.	आड़े-तिरछे प्रकार का एक साईकिल रेसिंग पथ

SSC MOCK TEST - 14 (ANSWER KEY)

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

For all Delhi Police Constable exams

