PINNACLE Learning Destination

Pinnacle Learning Destination
Plot No.3 Third Floor Main Road
Raghunathpur, Sector 22 -Noida,
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SSC Solution on 2 Feb-019

1. (C) First is the Antonym of second
2. (A) $2 \times 3 \times 4 = 24$, $3 \times 2 \times 5 = \mathbf{30}$
3. (A) $7 + 2 + 3 = 12 \Rightarrow 1 + 2 = 3$
   $8 + 2 + 4 = 14 \Rightarrow 1 + 4 = \mathbf{5}$
4. (B) S R T K → +1 → T S U L ; M O P S → +1 → **N P Q T**
5. (D) Temple, Mosque and Gurudwara are places to **Worship.**
6. (C) Except **(28,54)**, others are multiple of 8
7. (D) A B C E (+1, +1, +2) ; M N O Q (+1, +1, +2)
   D E F H (+1, +1, +2) ; P Q R U (+1, +1, +3)
8. (B) Except 'O', all are vowels.
9. (C) M I N I S T **E** R (letter E not present)
10. (C) D ⟷ B (Couple), B → A (Sister), D → G (Daughter), G (Niece)
    So, 'G' is the niece of 'A'.
11. (B) $4 \times 8 = 32$
    $6 \times 3 = 18$
    $5 \times 4 = \mathbf{20}$
12. (B) $4 \times 6 + 5 = 29$
    $3 \times 5 + 3 = 18$
    $2 \times 6 + 4 = \mathbf{16}$
13. (C) $12 + 24 + 36 = 18 + 30 + 24 = 19 + 13 + \mathbf{40} = 72$
14. (D)
15. (C) R A T F O G (+3, +2, +2, +3, +2, +2) → U C V **I Q I**
16. (A) 3 6 9 18 36 42 **48** (+3, +3, ×2, ×2, +6, +6)
17. (D) 12 24 72 **288** 1440 (×2, ×3, ×4, ×5)
18. (C) NEAR → NEAT → **NECK** → NEED → NEST
19. (C) **R** > G > M > S or R > M > G > S
    So, Ram is the oldest among them.
20. (D) $I = 9 \Rightarrow 9 \times 2 = 18$
    $G = 7 \Rightarrow 7 \times 2 = 14$
    $B + E + D = 2 \times 2 + 2 \times 5 + 2 \times 4$
    $= 4 + 10 + 8 = \mathbf{22}$
22. (B) Average Speed
    $= \frac{2 \times 30 \times 20}{30 + 20}$
    $= \mathbf{24 km/hr}$
23. (B) 8 A 8 B 8 C 8 = $8 + 8 - 8 \times 8$
    $= 8 + 8 - 64$
    $= \mathbf{-48}$
    Hence, option (B) is correct.
24. (D)
25. (B)
26. (C) The world famous one of the largest herbarium in India is situated at the Indian Botanical Garden, Kalkaska. This herbarium is the largest herbarium of east. It is famous for the 'Great Banyan tree.' The largest herbarium in the world, at the museum national d'histoire naturally is in Paris, France.
27. (D) Srishti Kaur from India has been crowned Miss Teen Universe 2017 at the Ruben Dario National Theater in Managua, the capital of Central American country Nicaragua. She also won the Best National Costume Award at the prestigious pageant, which featured a peacock – the Indian national bird. Kaur succeeded Nieveles Gonzalez from Puerto Rico as the Miss Teen Universe. Apart from her, Xirelle Agustin from the Philippines won in the Teen Popularity category, while Nicole Obando from Costa Rica won the award for Teen Charm. The pageant is organized by the Miss Universe organization for teens aged 15 to 19.
28. (C) The Constituent Assembly met for the first time in New Delhi on 9 December, 1946 in the Constitution Hall which is now known as the Central Hall of Parliament House. On 29 August, 1947, the Constituent Assembly set up a Drafting Committee under the Chairmanship of Dr. B.R. Ambedkar to prepare a Draft Constitution for India.
29. (B) Consumer Price Index Number for Industrial Workers (CPI (IW)) is released by the Labour Bureau. Labour Bureau is responsible for the collation, collection and publication of statistics and related information on wages, earnings, productivity, absenteeism, labour turn-over, industrial relations, working and living conditions and evaluation of working of various labour enactments etc.

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30. (A) The World Day for Animals in Laboratories (also known as World Lab Animal Day (WLAD)) is observed every year on April 24 to mark the birthday of former National Anti-Vivisection Society (NAVS) president Hugh Dowding. Today the event is marked by demonstrations and protests by groups opposed to the use of animals in research. The day is not included on the official list of United Nations observances.
31. (D) The corona is the outermost layer of the Sun, starting at about 1300 miles (2100 km) above the solar surface (the photosphere). The temperature in the corona is 500,000 K (900,000 degrees F, 500,000 degrees C) or more, up to a few million K. The corona cannot be seen with the naked eye except during a total solar eclipse, or with the use of a coronagraph.
32. (B) Eight of the water-soluble vitamins are known as the vitamin B-complex group: thiamin (vitamin B1), riboflavin (vitamin B2), niacin (vitamin B3), vitamin B6 (pyridoxine), folate (folic acid), vitamin B12, biotin and pantothenic acid. The B vitamins are widely distributed in foods, and their influence is felt in many parts of the body. They function as coenzymes that help the body obtain energy from food. Vitamin (A), (D), (E) and (K) are fat soluble.
33. (C) Hydrogen Peroxide is a total chlorine free (TCF) bleaching agent. The chemical formula of this bleach is H_2O_2. Pure hydrogen peroxide is very light blue color but colorless in solution. It is the use of this bleaching agent increased significantly in the pulp and paper industry due to easy to use, lower production costs, improved paper quality, increased yield percentage and environmental friendly.
35. (D) Kasinadhuni Viswanath (87), the renowned actor-director, has been named for the prestigious 2016 Dada Saheb Phalke award for his outstanding contribution to the film industry. He is an icon in the film industry and known for classical and traditional art, music and dance. The award will be conferred by President Pranab Mukherjee at a function on May 3 at Vigyan Bhawan in New Delhi.
36. (B) Gandhara School was based on Greco-Roman norms encapsulating foreign techniques and an alien spirit. It is also known as Graeco-Buddhist School of art. The foreign influence is evident from the sculptures of Buddha in which they bear resemblance to the Greek sculptures. Grey sandstone (Blue-grey Mica schist to be precise) is used in Gandhara School of Art.
38. (C) The Constitution of India provides Fundamental Rights under Chapter III. Article 21. Protection of Life and Personal Liberty: No person shall be deprived of his life or personal liberty except according to procedure established by law.
39. (C) The food manufactured in the leaves is translocated upwards, downwards and laterally to all parts of the plant through the phloem. The phloem also conducts some other substances such as amino acids. The conducting cells of the phloem are cylindrical cells called sieve tubes, which have sieve like partitions at both ends. These partitions are called sieve plates.
40. (C) The National Development Council (NDC) or the Rashtriya Vikas Parishad is the apex body for decision making and deliberations on development matters in India, presided over by the Prime Minister. It was set up on 6th August 1952 to strengthen and mobilize the effort and resources of the nation in support of the plan to promote common economic policies in all vital spheres. The Council comprises the Prime Minister, the Union Cabinet Ministers, and Chief Ministers of all States or their substitutes, representatives of the Union Territories and the members of the NITI Aayog.
42. (D) Net neutrality is the principle that Internet service providers and governments regulating the Internet should treat all data on the Internet the same, not discriminating or charging differentially by user, content, website, platform, application, type of attached equipment, or mode of communication.
43. (C) The Central Armed Police Forces (CAPF) refers to uniform nomenclature of five security forces in India under the authority of Ministry of Home Affairs (MHA). They are the Border Security Force (BSF), Central Reserve Police Force (CRPF), Central Industrial Security Force (CISF), Indo-Tibetan Border Police (ITBP) and Sashastra Seema Bal (SSB). Recently, Rajiv Rai Bhatnagar, the 1983 batch of the Uttar Pradesh cadre IPS officer, has been appointed the new Director General of the CRPF.

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44 (C) There was no official language as such during the period of Akbar the Great because there was no country called India.Then, it was called Mughal Sultanate. Coming to the language, Persian was used in the Court of Akbar for all the administrative purposes.

45 (B) The Param Vir Chakra (PVC) is India's highest military decoration awarded for the highest degree of valour or self-sacrifice in the presence of the enemy, similar to the British Victoria Cross, US Medal of Honour, Pakistani Nishan-e-Haider, or French Legion of Honor or Russian Cross of St. George.

49. (D) The definition and meaning of general equilibrium in economics is a perfect state, when demand and supply are equal to each other, they are in balance – in perfect harmony. The term is also known as Walrasian general equilibrium. The general equilibrium analysis was developed by Leon Walras (1834-1910), a French mathematical economist and Georgist.

51. (C) Let the present age of son = x years
then, the present age of man = $x + 24$
ATQ,
$(x + 24) + 2 = 2(x + 2)$
$\Rightarrow x + 26 = 2x + 4$
$\Rightarrow x = 22$
$\therefore$ Present age of son = **22 years**

52. (A) Given :-
Length = 1.15 × breadth.
$\therefore$ Area = $l \times b$
$\Rightarrow 460 = 1.15\, b \times b$
$\Rightarrow b^2 = \frac{460 \times 100}{115}$
$\Rightarrow b = \sqrt{400} = 20$
$\therefore$ Required breadth = **20m**

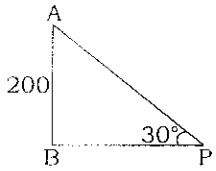
53. (C) Average weight of 16 boys = 50.25
Total weight of 16 boys = 50.25 × 16
Average weight of 8 boys = 45.15
Total weight of 8 boys = 45.15 × 8
Total weight of 24 boys = (50.25 × 16) + (45.15 × 8)
$\therefore$ Required average weight
$= \frac{(50.25 \times 16) + (45.15 \times 8)}{24}$
= **48.55 kg**

54. (A) Speed upstream = $\frac{8}{\frac{24}{60}} = 20$ km/hr
Speed of the stream = 4km/hr
$\therefore$ Speed of the boat in still water = (20+4)
= **24km/hr**

55. (D) Meal for 200 children = Meal for 120 men
$\Rightarrow$ Meal for 150 children
= Meal for $\frac{120 \times 150}{200}$ men
= Meal for 90 men
$\therefore$ Required number of men = 120 – 90= **30 men**

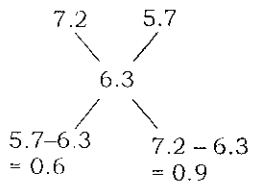
56. (B) Sum of decimal place = 3 + 4 = 7
As 5 × 8 = 40 (digit at extreme right)
So, we have **6** significant digits to the right of decimal point

57. (B)



$\tan 30° = \frac{AB}{BP}$
$\Rightarrow \frac{1}{\sqrt{3}} = \frac{200}{BP}$
$\Rightarrow BP = 200\sqrt{3}$
$\therefore$ Required distance
$= 200\sqrt{3}$
$= 1.732 \times 200 =$ **346.4m**

58. (C)



$\therefore$ Required Ratio = $\frac{0.6}{0.9} = \frac{2}{3}$

59. (C) Let the profit be x
As, 5% is for charity, so rest 95% is divided between A and B in the ratio 3 : 2
A's profit = $0.95x \times \frac{3}{5}$
ATQ,
$0.95x \times \frac{3}{5} = 855$
$\Rightarrow x = \frac{855 \times 5}{0.95 \times 3} = 1500$
$\therefore$ Total Profit = ₹**1500**

60. (C) Total votes = 1136 + 7636 + 11628
= 20400
$\therefore$ Required Percentage = $\frac{11628}{20400} \times 100$
$= \frac{11628}{204} =$ **57**

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61. (B) Required time $= \frac{12\times24}{12+24}$

$= \frac{12\times24}{36} =$ **8 minute**

62. (B) Required Profit $= \left(\frac{100\times48}{12\times350}-1\right)\times100$

$= \frac{1}{7}\times100 = \mathbf{14\frac{2}{7}\%}$

63. (C) Let the required number of years be x
ATQ,

$$\frac{150\times6\times x}{100} = \frac{800\times\frac{9}{2}\times2}{100}$$

$\Rightarrow x = \frac{800\times9}{150\times6} = 8$

$\therefore$ Required number of years = **8**

64. (B) Let the number of years be n.

$$P\left(1+\frac{r}{100}\right)^n = 34347$$

$$\Rightarrow 30000\left(1+\frac{7}{100}\right)^n = 34347$$

$$\Rightarrow \left(\frac{107}{100}\right)^n = \frac{34347}{30000}$$

$$\Rightarrow \left(\frac{107}{100}\right)^n = \frac{11449}{10000}$$

$$\Rightarrow \left(\frac{107}{100}\right)^n = \left(\frac{107}{100}\right)^2$$

$\Rightarrow n = 2$

$\therefore$ Required number of years = **2**

65. (A) $7^{x-y} = 343 = 7^3$

$\Rightarrow x - y = 3$ ----------(1)

Also, $7^{x+y} = 16807 = 7^5$

$\Rightarrow x + y = 5$ ----------(2)

From equation (1) and (2)

$x = 4$

$\therefore$ Required value of $\boldsymbol{x = 4}$

66. (D) Distance travelled in 1st hr = 35 km

Distance travelled in 2nd hr = 35 + 2 = 37 km

Distance travelled in 3rd hr = 39 km

$\therefore$ Total distance travelled in 12 hr

= (35 + 37 + 39 + ----- (12th hr))

$= \frac{12}{2}\{2\times35 + 2(12-1)\}$

$= 6(70 + 22)$

= **552kms.**

67. (C) Let a and b be the work done by a man and a woman in 1 day respectively

$6a + 8b = \frac{1}{10}$

$\Rightarrow 60a + 80b = 1$ ----------(i)

Also, $26a + 48b = \frac{1}{2}$

$\Rightarrow 52a + 96b = 1$----------(ii)

From (i) and (ii) we have,

$a = \frac{1}{100}$ and $b = \frac{1}{200}$

So, work done by 15 men and 20 women

$= \frac{15}{100} + \frac{20}{200} = \frac{1}{4}$

$\therefore$ Required time = **4 days.**

68. (B) Speed of train $= \frac{300}{18} = \frac{50}{3}$ m/s

Distance covered in 39 seconds

$= 39\times\frac{50}{3} = 650$m

$\therefore$ Length of the platform

= 650 – 300

= **350m**

69. (B) By using componendo and dividendo,

$\frac{2\sin\theta}{2\cos\theta} = \frac{5+4}{5-4}$

$\Rightarrow \tan\theta = 9$

$\therefore \frac{\tan^2\theta+1}{\tan^2\theta-1} = \frac{9^2+1}{9^2-1} = \frac{82}{80} = \mathbf{\frac{41}{40}}$

70. (B) $\tan\theta - \cot\theta = 0$

$\Rightarrow \tan\theta = \cot\theta$

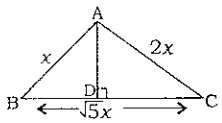
$\Rightarrow \theta = 45°$

So, $\sin\theta + \cos\theta = \sin45° + \cos45°$

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

$= \frac{2}{\sqrt{2}} = \boldsymbol{\sqrt{2}}$

71. (A)



In ΔABC,

$BC^2 = AB^2 + AC^2$

$\Rightarrow BC^2 = x^2 + (2x)^2$

$\Rightarrow BC = \sqrt{5}\,x$

Now, $BD = \frac{AB^2}{BC}$

$\Rightarrow BD = \frac{x^2}{\sqrt{5}x} = \frac{x}{\sqrt{5}}$

$\Rightarrow BD = \frac{AB}{\sqrt{5}}$

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72. (A) $x + \frac{1}{2x} = 2$

$\Rightarrow 2\left(x + \frac{1}{2x}\right) = 4$

$\Rightarrow 2x + \frac{1}{x} = 4$

$\Rightarrow 8x^3 + \frac{1}{x^3} + 3.2x \cdot \frac{1}{x}\left(2x + \frac{1}{x}\right) = 64$

$\Rightarrow 8x^3 + \frac{1}{x^3} + 6 \times 4 = 64$

$\Rightarrow 8x^3 + \frac{1}{x^3} = \mathbf{40}$

73. (B) Required difference = (35 – 33)% of 250000

$= \frac{2}{100} \times 250000 = \mathbf{5000}$

74. (C) 8% = 4000

$\Rightarrow 35\% = \frac{4000 \times 35}{8} = 17500$

∴ Number of Literate males = **17500**

75. (D) 100% = 360°

$\Rightarrow 1\% = \frac{360°}{100}$

$\therefore 24\% = \frac{360°}{100} \times 24 = 86.4°$

∴ Required angle = **86.4°**

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MEANINGS IN ALPHABETICAL ORDER

WORDS	MEANING IN ENGLISH	MEANING IN HINDI
Abundant	existing or available in large quantities; plentiful.	प्रचुर मात्रा में
Billow	a large undulating mass of something, typically cloud, smoke, or steam.	बड़ी लहर, तरंग
Blazon	publish widely.	प्रचार करना
Buzz	a low, continuous humming or murmuring sound, made by or similar to that made by an insect.	गुंजन, भिनभिनाहट
By dint of	by means of.	के बल पर
By virtue of	as a result of.	के आधार पर/ के बल पर
Cerumen	technical term for earwax	कान का मैल
Chaperon	a person who goes with and is responsible for a group of young people	संरक्षक
Heedless	showing a reckless lack of care or attention.	बेपरवाह
Herald	be a sign that (something) is about to happen.	अग्र-दूत
Immanent	existing or operating within, inherent.	अंतवर्ती
Imperceptibly	not perceptible by sense	जो महसूस ना किया जा सके
Impostor	one that assumes false identity or title for the purpose of deception	छली, कपटी, बहरूपिया
Inordinate	exceeding reasonable limits	अत्यधिक
Lurid	presented in vividly shocking or sensational terms	सनसनीखेज
Manifest	show (a quality or feeling) by one's acts or appearance; demonstrate.	प्रकट करना
Marginally	not of central importance	महत्त्वहीन
Polymorphism	the condition of occurring in several different forms.	बहुरूपता
Primates	a mammal of an order that includes the lemurs, bushbabies, tarsiers, marmosets, monkeys, apes, and humans	नरवानर
Propensity	an often intense natural inclination or preference	झुकाव
Prosodic	of or relating to prosody	छन्द शास्त्र से संबंधित
Prosody	the study of versification	छन्द शास्त्र
Prospector	one who explore an area especially for mineral deposits	खनिज पदार्थ निकालने वाला
Quibble	a slight objection or criticism.	कमी
Refined	with impurities or unwanted elements having been removed by processing.	शुद्ध अथवा बारीक किया हुआ
Roar	a full, deep, prolonged cry uttered by a lion or other large wild animal.	गरज
Trumpet	proclaim widely or loudly.	घोषित करना
Turncoat	a person who deserts one party or cause in order to join an opposing one.	गद्दार, दलबदलु

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SSC Answer key on 21 feb - 019

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