Pinnacle Learning Destination
Plot No.3 Third Floor Main Road
Raghunathpur, Sector 22 -Noida,
Uttar Pradesh
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SSC Solution On 08 Sept -017

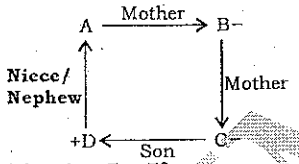
1. (D) As, KILOGRAM has 8 letters and $8^3 = 512$. Similarly, KILOMETER has 9 letters and **$9^3 = 729$**
2. (C) As,

S I S T E R
opp. opp.
H S I G R E

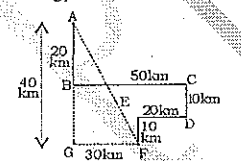
Similarly,

M O T H E R
opp. opp.
N T O S R E

3. (B) As, Histology deals with the study of Tissues. Similarly, Ecology deals with the study of **Environment**
4. (D) Except **UOFA,** the remaining have vowels only.
5. (A) Except **Ostrich**, the remaining can fly.
6. (D) Except **Subtraction**, the remaining are synonyms.
7. (D)



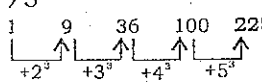
8. (C) $20 = 9 \times 5 - 5^2$
$20 = 8 \times 7 - 6^2$
$17 = 9 \times 9 - 8^2$
$47 = 8 \times 9 - \mathbf{5^2}$
9. (C) $55 = 8 \times 9 - (9+8)$
$29 = 6 \times 7 - (6 + 7)$
$\mathbf{20} = 8 \times 4 - (8 + 4)$
10. (C) $72 = 9 \times 8$
$45 = 5 \times 9$
$30 = 6 \times 5$
$\mathbf{48} = 8 \times 6$
11. (A) ATQ,



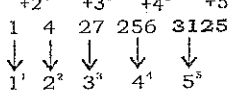
AG = AB + CD + EF = 40 km
GF = BC – ED = 50 – 20 = 30 km
Points AGF form a right angle triangle
So, AF = **50 km**
12. (D) From fig (i) and (iii)

3 4 6
$\frac{3}{5}$ 2 1

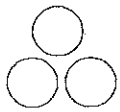
13. (C)



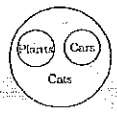
14. (B)



15. (B) $x + x + 4 + \text{----------} + x + 20 = 78$
$\Rightarrow 6x + 4(1 + 2 + 3 + 4 + 5) = 78$
$\Rightarrow 6x = 78 - 60 = 18$
$\Rightarrow x = \mathbf{3\ years}$
16. (D)

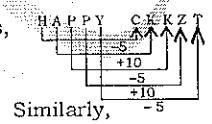


17. (B)

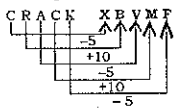


I. **False**
II. **False**

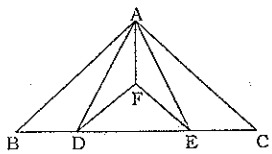
18. (C)
Letter → Word → Sentence → Paragraph
4 **1** **3** **2**
19. (A) As,



Similarly,



20. (C) ababcabcdabcde
21. (D) $25 \div 5 - 10 \times 2 + 30 = 15$
22. (C)



ΔABC, ΔADB, ΔDEF, ΔADF, ΔAFE, ΔACE, ΔADE, ΔADC, ΔABE

23. (C)
24. (C) Obediance → Obedience → Obediencia → Obedient
25. (D)
26. (C) Paddy is a tropical crop and grown where the average temperature during the growing season is between 22°C and 27°C.Abundant sunshine is essential during its four months of growth. The minimum temperature should not go below 15°C as germination cannot take place below that temperature.
The temperature required for wheat during growing season is around 15.5°C.

The weather should be warm and moist during the early stage of growth and sunny and dry in the later stages. The average temperature of the hottest month should not exceed 20°C. A frost-free period of 100 days is usually required but some fast-ripening varieties may mature only in 90 days.

- Maize is grown in temperatures between 26°C and 27°C during the day and around 14°C during the night. But the most important factor is the 140 frost-free days. The crop is very susceptible to frost; therefore, its cultivation in temperate latitudes is limited.
- Groundnuts grow well in warm areas, below 1500m above sea level. The best temperature requirement is about 30° C. They do not grow below 15° C.

27. (B) The 43rd edition of G7 summit will be held at Taorminain Sicily, Italy. The attendees will include the leaders of the seven G7 member states as well as representatives of the European Union. The 43rd G7 summit will be the first summit for British Prime Minister Theresa May, French President Emmanuel Macron, Italian Prime Minister Paolo Gentiloni and U.S. President Donald Trump.
28. (C) The Kesavananda Bharathi judgment or His Holiness Kesavananda Bharati Sripadagalvru v/s State of Kerala is a landmark decision of the Supreme Court of India that outlined the Basic Structure doctrine of the Constitution.
29. (A) The Committee on Investor Awareness and Protection, chaired by Mr D. Swaroop from Pensions Fund Regulatory Authority of India (PFRDA), on the need for minimum standards for financial advisers and financial education. The paper states that the twin goals of regulation and making the populace financially able are essential for the healthy growth of the financial service industry.
30. (A)Vinay Mohan Kwatra, A 1988-batch Foreign Service officer, has been appointed as the next ambassador to France. Kwatra will succeed Mohan Kumar, who is retiring. Currently, he is a joint secretary in the Prime Minister's Office (PMO). He has also held the position of joint secretary in-charge of the counter-terrorism division in the MEA.
31. (B) Naujawan Bharat Sabha was a left-wing Indian association that sought to foment revolution against the British Raj by gathering together worker and peasant youths. It was founded by Bhagat Singh in March 1926 and was a more public face of the Hindustan Republican Association.
33. (C) Hygrometers is instruments used for measuring humidity. A simple form of a hygrometer is specifically known as a "psychomotor" and consists of two thermometers, one of which includes a dry bulb and the other of which includes a bulb that is kept wet to measure wet-bulb temperature.
36. (C) Muller's work contributed to the developing interest in Aryan culture, which often set Indo-European ('Aryan') traditions in opposition to Semitic religions. For Müller the discovery of common Indian and European ancestry was a powerful argument against racism, arguing that "an ethnologist who speaks of Aryan race, Aryan blood, Aryan eyes and hair, is as great a sinner as a linguist who speaks of a dolichocephalic dictionary or a brachycephalic grammar" and that "the blackest Hindus represent an earlier stage of Aryan speech and thought than the fairest Scandinavians".
37. (A) • The Nile is a major north-flowing river in north-eastern Africa. It is generally regarded as the longest river in the world. Egyptian civilization and Sudanese Kingdoms have depended on the river since ancient times. Most of the population and cities of Egypt lie along those parts of the Nile valley north of Aswan, and nearly all the cultural and historical sites of Ancient Egypt are found along river banks.
    - Java is an island of Indonesia. With a population of over 141 million (the island itself) or 145 million (the administrative region) as of 2015 Census released in December 2015, Java is home to 56.7 percent of the Indonesian population and is the most populous island on Earth. The Indonesian capital city, Jakarta, is located on western Java.
38. (D) Article 75(3) of the Indian Constitution makes the council of ministers collectively responsible to the house of people or the Lok Sabha. This means that if the Ministry loses the confidence of the "Lok Sabha", all ministers including those who are from Rajya Sabha have to go. The entire ministry is obliged to resign. This means that ministers

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fall and stand together. This is called "Rule of Collective Responsibility".

39. (A) • In plants, photosynthesis takes place in Chloroplasts, which contain the Chlorophyll. Chloroplasts are surrounded by double membrane and contain a third inner membrane, called the Thylakoid membrane.
    - Mitochondria are known as the power houses of the cell. They are organelles that act like a digestive system which takes in nutrients, breaks them down, and creates energy rich molecules for the cell. The biochemical processes of the cell are known as cellular respiration.
    - Messenger RNA (mRNA) molecules carry the coding sequences for protein synthesis and are called transcripts; ribosomal RNA (rRNA) molecules form the core of a cell's ribosomes and transfer RNA (tRNA) molecules carry amino acids to the ribosomes during protein synthesis.
40. (B) In India, at present, there are 6 Zonal Council. Originally five councils were created as per the States Reorganization Act 1956 as follows: Northern Zonal Council, Central Zonal Council, Eastern Zonal Council, Southern Zonal Council, and Western Zonal Council. The North East Council was set up in 1971.
42. (A) National Programme of Nutritional Support to Primary Education, popularly known as the Mid-Day Meal Scheme (MDM) was started in 1995. The Midday Meal Scheme is covered by the National Food Security Act, 2013.
43. (C) Karan Singh (59), the Ayurveda and Co-Operative Minister of Himachal Pradesh, has recently passed away at All India Institute of Medical Sciences (AIIMS) in Delhi. He was elected from Banjar assembly constituency in Kullu district in the last assembly elections in 2012.
45. (A)

Rank	Country	Uranium Reserves (metric tons)
1.	Australia	1,706,100
2.	Kazakhstan	679,300
3.	Russian Fed	505,900
4.	Canada	493,900

46. (B) In chemistry, the term transition metal (or transition element) has three possible meanings;
    - The IUPAC definition defines a transition metal as "an element whose atom has a partially filled d sub-shell, or which can give rise to cations with an incomplete d sub-shell"
    - Many scientist describe a "transition metal" as any element in the d-block of the periodic table, which includes groups 3 to 12 on the periodic table. In actual practice, the f-block lanthanide and actinide series are also considered transition metals and are called "inner transition metals".
    - Cotton and Wilkinson expand the brief IUPAC definition by specifying which elements are included. As well as the elements of groups 4 to 11, they add scandium and yttrium in group 3 which have a partially filled d sub shell in the metallic state. These last two elements are included even though they do not (so far) seem to possess the catalytic properties which are so characteristic of the transition metals in general. Lanthanum and actinium in Group 3 are however classified as lanthanides respectively.
47. (D) The hepatic portal vein is a blood vessel that carries blood from the gastrointestinal tract and spleen to the liver. This blood is rich in nutrients that have been extracted from food.
48. (A) Calcium is a mineral that helps you build and maintain strong bones and teeth. Good calcium intake throughout your life can help to prevent osteoporosis. When you have osteoporosis your bones are weak and thin from loss of calcium. Weak bones can break more easily than strong bones. Calcium is also used in other parts of your body. It helps your muscles work and your heart beat. Skimmed milk, ragi, Egg and fish such as sardines and canned salmon are great sources of calcium.
49. (B) In India, the Ombudsman is known as the Lokpal or Lokayukta. An Administrative Reforms Commission (ARC) was set up on 5 January 1966 under the Chairmanship of Shri Morarji Desai. It recommended two tier machinery : Lokpoal at the Centre (Parliamentary commissioner, as in New Zealand) and one Lokayukta each at the State level.
50. (C) Megasthenes was an ancient Greek historian, diplomat and Indian ethnography and explorer in the Hellenistic period, author of the work Indicia. He was born in Asia Minor and became an ambassador of Seleucus Nicator of the Seleucid dynasty possibly to Chandragupta Maurya in Pataliputra, India.

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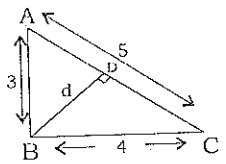
51. (D) A → 15, B → 20, A+B+C → 5 ⟩ 60 ⟨ 4, 3, 12

$\therefore$ Time taken by C = $\frac{60}{12-4-3}$ = **12 days**

52. (B) ATQ,



$BD = \frac{AB \times BC}{AC}$

$\Rightarrow BD = \frac{3 \times 4}{5}$ = **2.4cm**

53. (A) ATQ,

Failed Boys = $\frac{28 \times 2000}{100} = 560$

Failed Girls = $\frac{38 \times 1300}{100} = 494$

Total failed candidates = $\frac{(560+494) \times 100}{3300}$

= **31.94%**

54. (B) ATQ,

$\sqrt{3} \cot\theta = 3\cos\theta$

$\Rightarrow \sin\theta = \frac{1}{\sqrt{3}}$

$\Rightarrow \sin^4\theta = \frac{1}{9}$

Again, $\sin\theta = \frac{1}{\sqrt{3}}$

Apply Pythagoras Theorem,

$\Rightarrow \cos\theta = \frac{\sqrt{2}}{\sqrt{3}}$

$\Rightarrow \cos^4\theta = \frac{4}{9}$

Then,

$\sin^4\theta - \cos^4\theta = \frac{1}{9} - \frac{4}{9} = \frac{-1}{3}$

55. (A) ATQ,

$\frac{\pi r^2 h}{2\pi r h} = \frac{12474}{1188}$

$\Rightarrow r = 21$ cm

and, $2\pi r h = 1188$

$\Rightarrow h = 9$ cm

Hence, h : r

9 : 21

3 : 7

56. (D) ATQ,

$x - y = \frac{15}{30} \times 60 = 30$ kmph-------(i)

and,

$x + y = \frac{30}{30} \times 60 = 60$ kmph-------(ii)

From equation (i) and (ii),

$x = 45$ kmph and $y = 15$ kmph

$\therefore$ Total time = $\frac{90}{45}$ = **2 hours**

57. (A) ATQ,

$x^2 + x = 9702$

with the help of options,

$\Rightarrow x =$ **98**

58. (B) ATQ,

$a^4 + a^2b^2 + b^4 = a^4 + a^2b^2 + b^4 + a^2b^2 - a^2b^2$

$\Rightarrow 147 = a^4 + 2a^2b^2 + b^4 - a^2b^2$

$\Rightarrow 147 = (a^2 + b^2)^2 - a^2b^2$

$\Rightarrow 147 = (a^2 + b^2 - ab)(a^2 + b^2 + ab)$

Hence, $a^2 + b^2 + ab = \frac{147}{21} =$ **7**

59. (D) ATQ,

$121 = P\left(\frac{11}{100}\right)^2$

$\Rightarrow P =$ **₹10000**

60. (B) ATQ,

$\cos\theta + \sec\theta = 2$

$= \cos\theta + \frac{1}{\cos\theta} = 2$

$= \cos^2\theta + 1 - 2\cos\theta = 0$

then, $\cos\theta = 1$

$\Rightarrow \theta = 0°$

So, $\sin 0° - \text{cosec}\, 0° =$ **0**

61. (A) Required difference = 20% of 800 – 14% of 600

= 160 – 84 = **76**

62. (C) Required Percentage = $\frac{16\% \text{ of } 600}{10\% \text{ of } 800}$

= $\frac{96}{80} \times 100 =$ **120**

63. (B) Ratio at shop B

Mango : Apple : Orange

$\frac{40 \times 600 \times 25}{100} : \frac{60 \times 16 \times 600}{100} : \frac{25 \times 14 \times 600}{100}$

100 : 96 : 35

64. (C) Required average = $\frac{61+67+71+73+79+83+89+97}{8} = \frac{620}{8}$

= **77.5**

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65. (D) ATQ,

$\sqrt{2100-731} = \sqrt{1369} = 37$

$\sqrt{525+499} = \sqrt{1024} = 32$

$\sqrt{756+688} = \sqrt{1444} = 38$

$\sqrt{2177-656} = \sqrt{1521} = \mathbf{39}$

66. (D) ATQ,

$$x^3 - \frac{1}{x^3} = 140$$

$$\Rightarrow x - \frac{1}{x} = 5 \text{---------(i)}$$

and,

$$x^2 + \frac{1}{x^2} = 62$$

$$\Rightarrow x + \frac{1}{x} = 8 \text{-------(ii)}$$

From equation (i) and (ii),

$$x = \frac{13}{2} \text{ and } \frac{1}{x} = \frac{3}{2}$$

then,

$$x : \frac{1}{x}$$

$$\Rightarrow \frac{13}{2} : \frac{3}{2} = \mathbf{13 : 3}$$

67. (A) Let cost price = x

ATQ,

$$x \times \frac{115}{100} \times \frac{120}{100} \times \frac{350}{3\times100} = 80500$$

$\Rightarrow x = ₹\mathbf{50000}$

68. (B) Let the numbers = $13x$ and $27x$

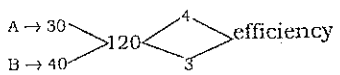
ATQ,

$$\frac{13x+27}{27x+13} = \frac{3}{5}$$

$\Rightarrow x = 6$

Hence, the numbers are **78** and **162**

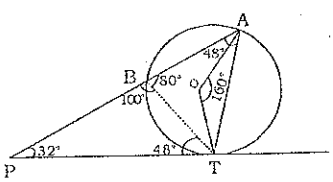
69. (C) ATQ,



Hence, Required number of days $= \frac{120-12\times3}{7}$

$= \mathbf{12 \text{ days}}$

70. (A) ATQ,



$\angle PAT = \angle BTP = 48°$

(Alternate Segment Theorem)

Now, In ΔPTA

$\angle TPA = \angle TBA = \angle BTP = 80° - 48° = \mathbf{32°}$

71. (A) Required average speed $= \frac{2\times25\times37}{25+37}$

$= \mathbf{29\frac{26}{31}}$ kmph

72. (D) Let rate (for annually) = $2r$

then, rate (for half yearly) = r

ATQ,

$$1000\left(1+\frac{r}{100}\right)^3 = 1331$$

$$\Rightarrow \left(1+\frac{r}{100}\right)^3 = \frac{1331}{1000} = \left(\frac{11}{10}\right)^3$$

$\Rightarrow r = 10$

Hence, the rate = 2 × 10 = **20%**

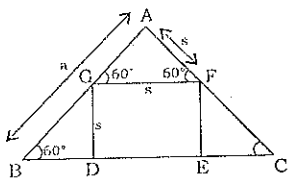
73. (D) For formation of triangle

Sum of two sides > third side

But, **10 + 15 < 28**

$\therefore$ This does not make any Δ.

74. (C) ATQ,



In ΔBDG

$BG = \text{cosec } 60° \times GD$

$$BG = \frac{2}{\sqrt{3}}s$$

and $\Delta AGF \sim \Delta ABC$ [$\because DE \parallel GF$]

Now,

$$\Rightarrow a = BG + GA = \frac{2}{\sqrt{3}}s + s$$

$$\Rightarrow a = \frac{2+\sqrt{3}}{\sqrt{3}}s$$

$$\Rightarrow \frac{s}{a} = \frac{\sqrt{3}}{2+\sqrt{3}} \quad \therefore$$

75. (A) $\tan\theta + \cot\theta = \frac{\sin^2\theta+\cos^2\theta}{\sin\theta\cos\theta}$

$= \text{cosec}\,\theta \sec\theta = \sqrt{1+\cot^2\theta}\sqrt{1+\tan^2\theta}$

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MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Abyss/ Chasm	A deep or seemingly bottomless pit. It is similar to abyss. Abyss is though dangerous or like hell.	बहुत गहरा गड्ढा
Attune	make receptive or aware	अनुकूल करना
Augur	foretelling a good or bad outcome	सगुन, भविष्य बतलाना
Avalanche	a sudden great rush of snow	हिमस्खलन
Birch	a type of tree	एक प्रकार का पेड़
Blizzard	an intensely strong cold wind filled with fine snow	बर्फ़ का तूफान
Canoe	a pointed light narrow boat	एक प्रकार की हल्की नाव
Chivalrous	of or relating to a knight or knighthood	शौर्यवान
Crude	rough or inexpert in plan or execution, not refined	अपरिपक्व
Downpour	a sudden heavy rain	मूसलाधार बारिश
Drizzle	a fine misty rain	बूंदा बांदी
Exonerate	to clear from accusation or blame	दोषमुक्त करना
Fetter	restrain with chains	जंजीर में बाँधना
Gallant	spirited, brave	बहादूर
Gorge	a narrow passage through land	घाटी
Mauling	to handle roughly, beat, bruise	घायल करना
Menacingly	In a way that suggests the presence of danger	डरावने ढ़ग से
Meritocracy	a ruling of educated people	पढ़े-लिखे लोगो के द्वारा शासन
Monism	a view that there is only one kind of ultimate substance	अद्वैतवाद
Monomania	mental illness especially when limited in expression to one idea or area of thought	एक ही बात की धुन
Monopoly	a commodity controlled by one party	एकाधिकार
Monotheism	doctrine or belief that there is one God	एकेश्वरवाद
Obsolete	no longer in use	अप्रचलित
Oligarchy	government by the few	कुछ ही लोगों द्वारा शासित
Omit	to leave out or delete	छोड़ना
Paradox	a tenet contrary to received opinion	विरोधाभासी
Pedagogic	relating to teachers or education	शिक्षा-विज्ञान संबंधी
Phantasmagoria	an exhibition of optical effects and illusions	छाया चित्र का प्रदर्शनी
Prompt	to move to action or incite	तुरन्त
Snobbery	the behavior or attitude of people who think they are better than other people	अपने को दूसरे से अच्छा समझना, नखरे
Subtle	difficult to understand or perceive, not obvious	दूर्बोध, जाहिर नहीं
Tinker	attempt to repair or improve something in a casual or desultory way.	लापरवाही से मरम्मत करना
Torment	to cause pain or anguish to body or mind	पीड़ा देना
Trio	a group or set or three	तीन का समूह
Tritium	an isotope of hydrogen	हाइड्रोजन का आइसोटोप
Triumvirate	a group of three powerful people who share a position of authority	तीन व्यक्तियों का राज
Trivet	a three legged stand	लोहे की तिपाई

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Pin-201301Ph-+91-9555662244

SSC Answer key on 08 Sept-017

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

MAD

Pinnacle Learning Destination
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