

SSC Ka Soorma : SSC CGL Tier 1 Free Mock [Held on 18th-19th Jan] - Solutions

S1. Ans.(d)

Sol. $80 \div 20 + 6 - 3 \times 8$

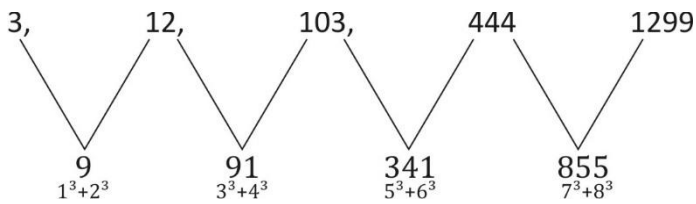
$4 + 6 - 24 = -14$

S2. Ans.(c)

Sol. All have 3 vowels except (c).

S3. Ans.(d)

Sol.



S4. Ans.(b)

S5. Ans.(d)

S6. Ans.(d)

Sol.

A F C

$1 + 6 + 3 = 10$

B F B

$2 + 6 + 2 = 10$

D C B

$4 + 3 + 3 = 10$

E B D

$5 + 2 + 4 = 11$

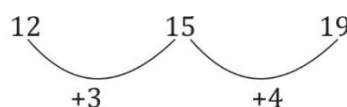
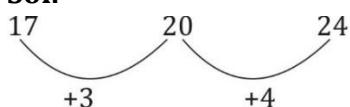
S7. Ans.(d)

Sol. All are perfect squares except (d)

S8. Ans.(c)

S9. Ans.(b)

Sol.



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S10. Ans.(b)

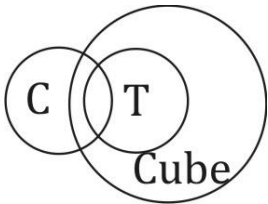
Sol.

$$\begin{array}{ccc} 5 & 1 & 25 \\ & \searrow & \nearrow \\ & & (2+3) \\ & & 5 \\ & \nearrow & \searrow \\ & & \times 1025 \end{array}$$

$$\begin{array}{ccc} 9 & 2 & 25 \\ & \searrow & \nearrow \\ & & 4+5 \\ & & 9 \\ & \nearrow & \searrow \\ & & \times 1025 \end{array}$$

S11. Ans.(a)

Sol.



S12. Ans.(b)

Sol.

$$\begin{array}{ccc} 5 & 1 & 3 \\ 5 & 2 & 4 \end{array}$$

S13. Ans.(c)

S14. Ans.(a)

S15. Ans.(a)

Sol. Lack of second thing is the results in first.

S16. Ans.(a)

Sol. $(9)^2 - ((2)^2 + (3)^2) = 68 \Rightarrow$ Reverse digit 86

$(9)^2 - ((6)^2 + (3)^2) = 36 \Rightarrow$ Reverse digit 63

S17. Ans.(a)

Sol. $\{9, 119, 11\} = (11 \times 9) + (11+9) = 99 + 20 = 119$

$\{7, 71, 8\} = (7 \times 8) + (7+8) = 56 + 15 = 71$

S18. Ans.(b)

Sol.

$$\begin{array}{cccc} H & A & I & R \\ 8 & +1 & +9 & +18 = 36 = 3+6 = 9 \end{array}$$

$$\begin{array}{cccc} B & A & N & K \\ 2 & +1 & +14 & +11 = 28 = 2+8 = 10 = 1+0 = 1 \end{array}$$

$$\begin{array}{ccc} F & L & Y \\ 6 & +12 & +25 = 43 = 4+3 = 7 \end{array}$$

S19. Ans.(d)

S20. Ans.(b)

Sol.

0	7	19	37	61	91
1^3-1 ,	2^3-1^3 ,	3^3-2^3	4^3-3^3 ,	5^3-4^3 ,	6^3-5^3

S21. Ans.(a)

Sol.



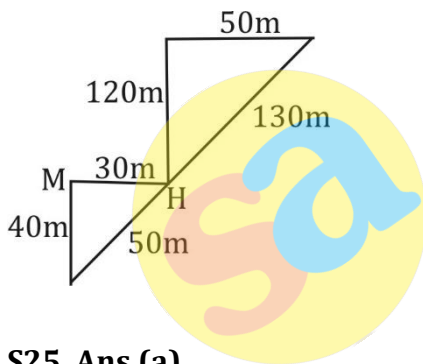
S22. Ans.(d)

Sol. first rotates about the second

S23. Ans.(b)

S24. Ans.(a)

Sol.



S25. Ans.(a)

S26. Ans.(b)

Sol. Many beautiful beads of blue Lapis Lazuli, Red Carnelian, and Agate stones of all colours have been found throughout Mohenjodaro and were probably worn by the women. Archaeologists have found beads in such locations as the Great Bath, where bathers probably lost them, and in the lower city, where bead makers may have dropped them in and around the kilns they used to make the beads.

S27. Ans.(c)

Sol. The SASTRA Ramanujan prize for 2019 will be awarded to mathematician Adam Harper, Assistant Professor with the University of Warwick, England.

S28. Ans.(d)

Sol. The Earth rotates around its axis from west to east. Earth's rotation is the rotation of the solid Earth around its own axis. The Earth rotates from the west towards the east. As viewed from the North Star or polestar Polaris, the Earth turns counter-clockwise.

S29. Ans.(b)

Sol. The following parts has been borrowed from the constitution of USA

1. Impeachment of the president
2. Functions of president and vice-president
3. Removal of Supreme Court and High court judges
4. Fundamental Rights
5. Judicial review
6. Independence of judiciary
7. Preamble of the constitution

S30. Ans.(d)

Sol. In the tenth book (Tenth Mandala) of Rigveda, 129th hymn (Suktam) deals with the origin of the universe and creation.

S31. Ans.(d)

Sol. A hot local wind blowing in sahara desert is known as Harmattan. The Harmattan is a dry and dusty West African trade wind. This northeasterly wind blows from the Sahara into the Gulf of Guinea between the end of November and the middle of March. The temperatures can be as low as 3 degrees Celsius.

S32. Ans.(b)

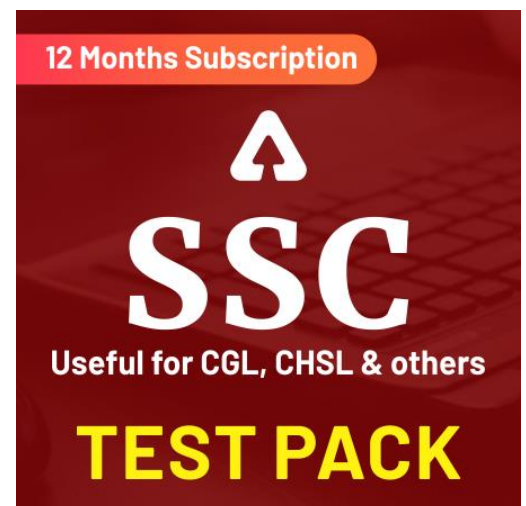
Sol. The 21st session of the Food and Agriculture Organisation (FAO) and World Health Organisation (WHO) Coordinating Committee was inaugurated in Panaji.

S33. Ans.(d)

Sol. The most appropriate measure of a country's economic growth is its per capita real income. Per capita income is average income, a measure of the wealth of the population of a nation. It is used to measure a country's standard of living thus a better indicator of economic growth.

S34. Ans.(b)

Sol. Current account convertibility was first coined as a theory by the Reserve Bank of India in 1997 by the Tarapore Committee. Full capital account convertibility allows local currency to be exchanged for foreign currency without any restriction on the amount.



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S35. Ans.(a)

Sol. The Directive Principles of the State Policy (DPSPs) lay down the guidelines for the state and are reflections of the overall objectives laid down in the Preamble of Constitution. The expression Justice-social, economic, political is sought to be achieved through DPSP. These are given in article 36-51.

S36. Ans.(c)

Sol. It is the force called 'transpirational pull' which maintains the continuous upward movement of water through xylem against the gravity.

S37. Ans.(a)

Sol. The fleshy edible part of the pear fruit is actually the swollen thalamus.

S38. Ans.(d)

Sol. Air is filled in vehicle tyres because it is highly compressible.

S39. Ans.(c)

Sol. The elements classified as metalloids are boron, silicon, germanium, arsenic, antimony, tellurium, and polonium.

S40. Ans.(b)

Sol. Tungsten has the highest melting point and lowest vapor pressure of all metals, and at temperatures over 1650°C has the highest tensile strength. It has excellent corrosion resistance and is attacked only slightly by most mineral acids. China leads in production of tungsten in the World.

S41. Ans.(b)

Sol. Wheat Crescent lies in Argentina.

S42. Ans.(a)

Sol. Exposure of common salt to air is a physical change.

S43. Ans.(a)

Sol. Fat has maximum calorific value.

S44. Ans.(b)

Sol. The Chairman of the Chiefs of Staff Committee, is the head of the Chiefs of Staff Committee. The most senior chief of staff is appointed to serve as a chairman until he retires. The current chairman is the General Bipin Rawat.

S45. Ans.(b)

Sol. The theme of World Tourism Day 2019 is 'Tourism and Jobs: a better future for all'. This year's theme focuses on generating more and better jobs, especially for youth and women.

S46. Ans.(a)

Sol. Maurya dynasty ruled over Magadha after Nanda dynasty. Chandragupta destroyed the Nanda dynasty around 321 BC, and became the first king of the great Mauryan empire.

S47. Ans.(b)

Sol. Gujjarra edict is located north of the village Gujjarra at the foot of a low hill locally known as Siddham ki Todiya. It was discovered in 1953 CE. Gujjarra is located near the town of Datia in Madhya Pradesh. The edict here refers Ashoka with his personal name.

S48. Ans.(c)

Sol. Voting right by the youths at the age of 18 years was exercised for the first time in the General Election of 1989.

S49. Ans.(d)

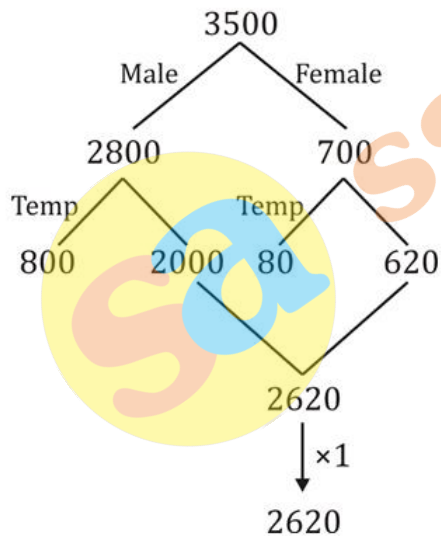
Sol. The real executive power is thus vested in the Council of Ministers with the Prime Minister as its head. The Council of Ministers is collectively responsible to the House of the People (Lok Sabha).

S50. Ans.(c)

Sol. The gall bladder is a small sac and is the storage depot for bile. Bile is only concentrated in the gall bladder.

S51. Ans.(c)

Sol.



Now, $\frac{9}{14} \times 3500 - 80 = 2170$

S52. Ans.(c)

Sol. $(77\% - 30\%) \rightarrow 940$

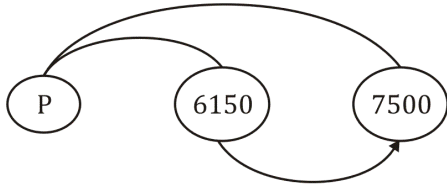
$47\% \rightarrow 940$

Required value = $\frac{940}{47\%} \times (37.84\% - 23\%)$

= $20 \times 14.84 = 296.8$

S53. Ans.(d)

Sol.



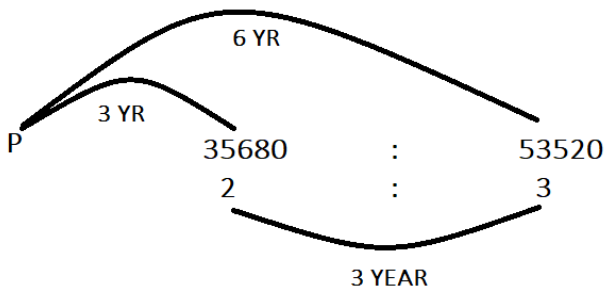
$$\frac{1350}{3} = 450 \text{ Rs./year}$$

$$P = 6150 - 450 = 5700$$

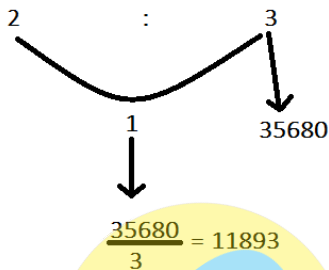
$$\text{Rate} = \frac{450}{5700} \times 100 = 7.89\%$$

S54. Ans.(a)

Sol.



ratio will remain same for first 3 year



S55. Ans.(b)

$$\text{Sol. } \frac{1}{x} = \frac{1}{x+7} + \frac{1}{x+28}$$

We get,

$$x = 14 \text{ days}$$

$$\frac{4}{7} \text{ of work complete in } = \frac{4}{7} \times 14 = 8 \text{ days.}$$

S56. Ans.(c)

$$\text{Sol. } A_1 + A_2 + \dots + A_{10} = 72 \times 10$$

$$A_1 + A_2 + \dots + A_4 = 69 \times 4$$

$$A_1 + A_2 + A_3 = 74 \times 3$$

$$A_8 + A_9 + A_{10} = 72 \times 10 - (69 \times 4 + 74 \times 3) = 222$$

$$\text{Let } A_8 = x$$

$$A_9 = x - 6$$

$$A_{10} = x - 12$$

$$3x = 240 \Rightarrow x = 80$$

$$\text{Required Average} = \frac{2x-6}{2} = x - 3 = 77$$

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S57. Ans.(b)

Sol. Usual time = $\frac{80}{10} - \frac{45}{60} = 7 \text{ hr } 15 \text{ min.}$

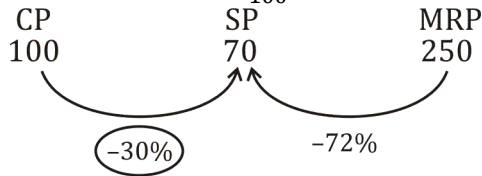
Now,

New time = $\frac{80}{16} = 5 \text{ hr}$

$x = 7 \text{ hr } 15 \text{ min} - 5 \text{ hr}$
 $= 135 \text{ minutes.}$

S58. Ans.(c)

Sol. $\Rightarrow 44 + 50 - \frac{44 \times 50}{100} = 72\%$



Required loss = $x = 30\%$

S59. Ans.(c)

Sol. $\frac{32}{360} \times 7200 = 640$

S60. Ans.(a)

Sol. $20\% \times 7200 = 1440$

Degree of 20% value = $\frac{1440}{7200} \times 360$
 $= 72^\circ$

No. of days whose degree is above $72^\circ = 3$

S61. Ans.(b)

Sol. Saturday = $\frac{130}{100} \left(\frac{54}{360} \times 7200 \right)$
 $= 1404$

Sunday = $\frac{80}{100} \left(\frac{77}{360} \times 7200 \right)$
 $= 1232$

Total = $1404 + 1232$
 $= 2636$

S62. Ans.(c)

Sol. 77 : 99

7 : 9

S63. Ans.(d)

Sol. $21600 = 2^5 \times 3^3 \times 5^2$

Sum of all the odd factors

$= [3^0 + 3^1 + 3^2 + 3^3] \times [5^0 + 5^1 + 5^2] = 1240$

S64. Ans.(b)**Sol.** Factors of 88 = 11 × 8

For divisibility by 11

$$\overbrace{7 \quad x \quad 1 \quad 9 \quad 1 \quad 2}^{(11+x) - 9 = 11}$$

$$(11 + x) - 9 = 11$$

$$\Rightarrow x = 9$$

S65. Ans.(b)**Sol.** LCM of = 12, 15, 21, 25 = 2100

Now, above 4000 multiple of 2100

$$= 4200$$

Which is 200 more.

Sum of digits = 2.

S66. Ans.(b)**Sol.** $x^8 - 1764x^4 + 1 = 0$

$$\Rightarrow x^4 + \frac{1}{x^4} = 1764$$

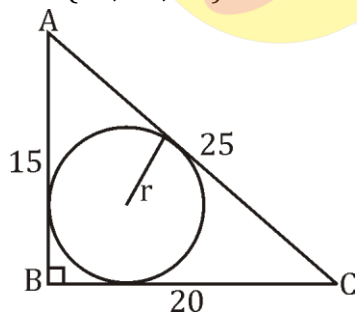
$$\Rightarrow x^2 + \frac{1}{x^2} = 42$$

$$\Rightarrow x - \frac{1}{x} = 2\sqrt{10}$$

S67. Ans.(a)**Sol.** $A^3 + B^3 + C^3 = 3ABC$ When $A + B + C = 0$

$$\therefore (5x + 2) + \{3(x - 4)\} + \{4(3x - 5)\} = 0$$

$$\Rightarrow 20x = 30 \Rightarrow x = 1.5$$

S68. Ans.(d)**Sol.** (15, 20, 25) forms a triplet

$$r = \frac{P+B-H}{2} = \frac{15+20-25}{2}$$

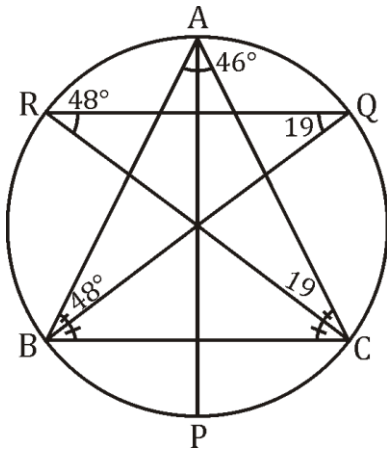
$$= 5$$

$$\therefore \text{Area} = \pi r^2 = \frac{22}{7} \times 25$$

$$= 78.57 \text{ cm}^2$$

S69. Ans.(a)

Sol.



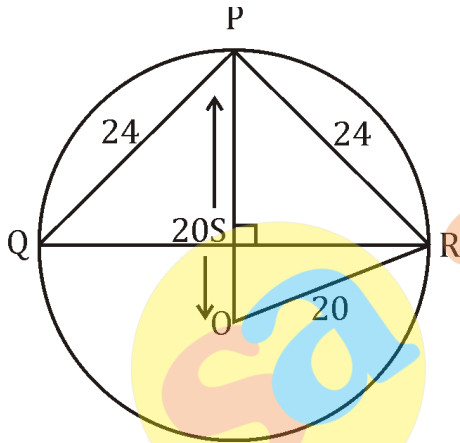
$\angle QRC = \angle QBC = 48^\circ$ (angle by same chord)

$\angle ACB = 180^\circ - (46^\circ + 48^\circ + 48^\circ) = 38^\circ$

$\angle BQR = \angle BCR = 19^\circ$ (angle by same chord)

S70. Ans.(c)

Sol.



Ar(ΔPOR) \rightarrow using Heron's formula

$$S = \frac{20+20+24}{2} = 32cm$$

$$\text{Area} = \sqrt{32 \times 12 \times 12 \times 8} = 192 \text{ cm}^2$$

Now, since $PQ = PR =$ equal chords

then $PS \perp QR$

Now Ar ΔPOR

$$\frac{1}{2} \times 20 \times RS = 192$$

$$\Rightarrow RS = 19.2 \text{ cm}$$

$$PS = \sqrt{(24)^2 - (19.2)^2} = 14.4 \text{ cm}$$

$$\therefore OS = (20 - 14.4) \text{ cm} = 5.6 \text{ cm}$$

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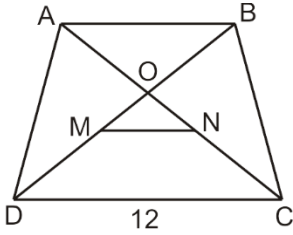
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S71. Ans.(a)

Sol.



$$MN = \frac{1}{2}(DC - AB) = \frac{1}{2}(12 - 8) = 2 \text{ cm}$$

S72. Ans.(b)

Sol. Volume of pipe = $\pi h(R^2 - r^2)$

$$= \frac{22}{7} \times 826 \times \{(3.5)^2 - (2.5)^2\} = 15576 \text{ cm}^3$$

Weight of pipe = 15576×9.5

$$= 147972 \text{ gms} = 147.97 \text{ kg}$$

S73. Ans.(d)

Sol. $\sin^2\theta = 3(\tan^2\theta - \sin^2\theta)$

$$\Rightarrow 4\sin^2\theta = 3 \times \frac{\sin^2\theta}{\cos^2\theta}$$

$$\Rightarrow \cos\theta = \frac{\sqrt{3}}{2} \Rightarrow \theta = 30^\circ$$

$$\therefore \left(\frac{1}{2} \operatorname{cosec}\theta + \cos\theta\right)^{-1}$$

$$= \left(\frac{1}{2} \times \operatorname{cosec}30^\circ + \cos30^\circ\right)^{-1}$$

$$= \left(\frac{1}{2} \times 2 + \frac{\sqrt{3}}{2}\right)^{-1} = \left(\frac{2+\sqrt{3}}{2}\right)^{-1} = \frac{2}{2+\sqrt{3}} = 2(2-\sqrt{3})$$

S74. Ans.(d)

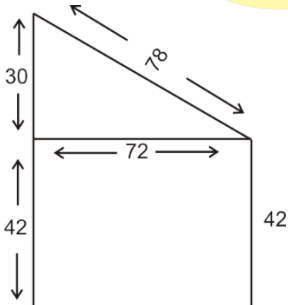
Sol. $\cos^2\theta - 2 = -2\sin\theta$

Put $\theta = 90^\circ$

$$-2 = -2$$

S75. Ans.(a)

Sol.



Triplet

(5, 12, 13)

↓ × 6

(30, 72, 78)

∴ Distance = 72 m

S76. Ans.(d)

S77. Ans.(a)

Sol. Replace “been” with “being”.

S78. Ans.(a)

Sol. Correct spelling is “**Connivance**” which means willingness to allow or be secretly involved in an immoral or illegal act.

S79. Ans.(c)

Sol. A **hot potato** means a sensitive situation or controversial issue that is difficult to handle and thus gets passed from one person to the next.

S80. Ans.(b)

Sol. **Filch** means to steal or take surreptitiously in small amounts; pilfer

Loot: steal goods from (a place), typically during a war or riot.

Rip off: a fraud or swindle, especially something that is grossly overpriced.

Plunder: steal goods from (a place or person), typically using force and in a time of war or civil disorder.

S81. Ans.(c)

Sol. Correct idiom to be used is “**on the outskirts**” which means the outer parts of a town or city. The outskirts are more like a line around an area, and it makes more sense to say *on* a line, than *in* it.

S82. Ans.(b)

Sol. “Comply” takes preposition “**with**” after it. “**Comply with**” forms an idiom which means to follow or adhere to a particular rule or regulation. Hence, option(b) is the correct choice.

S83. Ans.(d)

Sol. **Devising:** planning or inventing (a complex procedure, system, or mechanism) by careful thought.

S84. Ans.(a)

Sol. **Uncouth:** lacking good manners, refinement, or grace.

Refined: elegant and cultured in appearance, manner, or taste.

S85. Ans.(d)

Sol. **Vagrant:** a person without a settled home or regular work who wanders from place to place and lives by begging.

Rover: a person who spends their time wandering.

S86. Ans.(c)

Sol. **Precept:** a general rule intended to regulate behavior or thought.

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S87. Ans.(b)

Sol. Practiced: carry out or perform (a particular activity, method, or custom) habitually or regularly.

S88. Ans.(c)

Sol. Tantamount: equivalent in seriousness to; virtually the same as.

Paramount: more important than anything else; supreme.

Inferior: lower in rank, status, or quality.

Jubilant: feeling or expressing great happiness and triumph.

S89. Ans.(a)

Sol. Tarred with the same brush is an idiomatic expression which means to unfairly categorize someone or something as being the same as another person or thing, usually in a negative manner.

S90. Ans.(d)

S91. Ans.(a)

Sol. Imbecile: a stupid person.

Prat: an incompetent or stupid person; an idiot.

S92. Ans.(b)

Sol. When a suggestion in active voice with no object is changed into passive voice, the sentence begins with **"It is suggested that"**.

S93. Ans.(b)

S94. Ans.(c)

S95. Ans.(a)

Sol. Correctly spelt word is **"Doleful"** which means expressing sorrow; mournful.

S96. Ans.(d)

Sol. Up a blind alley: to be doing something that will definitely have a negative outcome.

S97. Ans.(d)

Sol. No improvement

S98. Ans.(c)

Sol. Since the given sentence is an example of indirect speech of past, hence options (a), (b) & (d) get eliminated. So, option(c) is the only correct choice here.

S99. Ans.(b)

Sol. Effete: no longer capable of effective action; tired.

Effete also means (of a man) weak or effeminate.

Hence, **powerful** is the correct antonym to it.

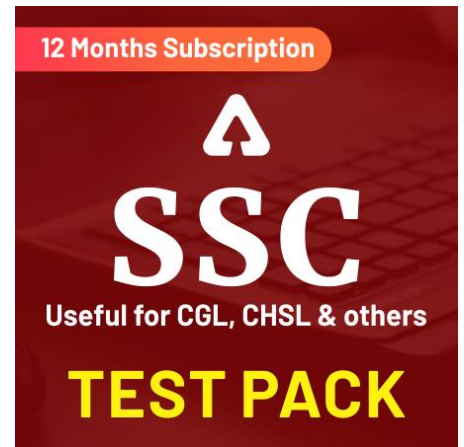
S100. Ans.(b)

Sol. Supine: failing to act or protest as a result of moral weakness or indolence.

Recline: lean or lie back in a relaxed position with the back supported.

Oblate: a person who is dedicated to a religious life, but has typically not taken full monastic vows.

Prostrate: reduce (someone) to extreme physical weakness.



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