

SSC Higher Secondary Level Exam Practice Set

Answers with Explanation

1. (a) **It** will be placed before **being** to complete the sentence appropriately. শ্রীচিভর্ষ
Combination of two or more sentences is possible only when the sentences have a common subject.
Look at the examples given below:
I read the book. I returned it to the library.
Having read the book I returned it to the library. (✓)
Reading the book I returned it to the library. (×)
It was a rainy day. I could not go out.
It being a rainy day I could not go out. (✓)
2. (b) **to put his signature** will replace **to put his sign** because – শ্রীচিভর্ষ
sign (Noun) an indication
Look at the examples given below:
I was asked **to sign** the letter.
There was **no sign** of his returning from Bangalore.
Hence, **to put his signature** is the right usage
3. (a) **are better off** will replace **could be better off** because –
be better off is used for saying that somebody is/would be happier/more satisfied if he was in a particular position or did a particular thing to have more money.
Look at the examples given below:
Families will **be better off** under the new law.
She is **better off** without him.
Hence, **you are better off these days** is the right usage
4. (c) **is he** will replace **isn't he** because –
The statement is **negative** and it will use a **positive tag**.
Look at the examples given below:
It isn't beautiful, is it?
They didn't leave, did they? শ্রীচিভর্ষ
You can do it, can't you?
5. (a) **to** will replace **into** because –
to (Prep.) indicates in a direction so as to reach
into (Prep.) indicates a position in/inside something
Look at the examples given below:
I'm going with her **to** Australia.
I went **into** the yard.
Hence, **I went to** is the right usage.
6. (b) **refuse (Verb):** deny; to say that you will not do something
deny (Verb): to refuse to admit or accept something শ্রীচিভর্ষ
regain (Verb): to get back something you no longer have
repair (Verb): to restore something that is broken, damaged or torn to good condition; put right
reduce (Verb): to make something less or smaller
7. (c) **scorn (Verb/Noun):** to have a strong feeling that somebody or something is stupid or not good enough, usually shown by the way you speak
abuse (Verb): to make bad use of something; misuse; insult; to use power or knowledge unfairly or wrongly
use (Verb): to do something with a machine, a method, an object, etc. for a particular purpose শ্রীচিভর্ষ
praise (Verb): to express your approval or admiration for somebody; compliment
raise (Verb): to move or lift to a higher level; to increase the amount; to collect money or people together
8. (a) **submissive (Adjective):** willing to accept somebody else's authority and willing to obey him without questioning
docile (Adjective): quiet and easy to control
stubborn (Adjective): determined not to change your opinion or attitude; obstinate
strong (Adjective): having great power; firm
changeable (Adjective): likely to change; unpredictable
9. (b) **grow (Verb):** to increase in size, number, strength or quality; to develop শ্রীচিভর্ষ
nurture (Verb): to care for and protect somebody or something while he/it growing or developing; foster শ্রীচিভর্ষ
encourage (Verb): to give support, courage or hope
maintain (Verb): to make something continue at the same level, standard, etc.; preserve.
10. (c) **phonetics**
phonetics (N.): the study of speech sounds and how they are produced

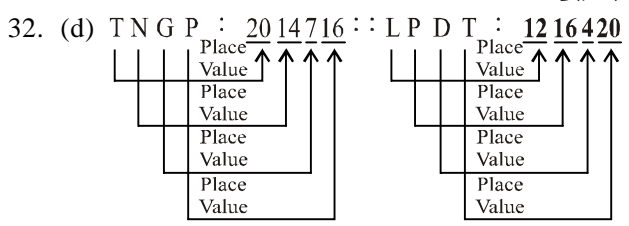
- stylistics (N.):** the study of style and the methods used in written language
linguistics (N.): the study of language or of particular languages
semantics (N.): the study of the meanings of words and phrases
11. (a) **epitaph** শ্রীচন্দ্র
epitaph (N.): words that are written or said about a dead person, on a gravestone/tomb
epitome (N.): a perfect example of something
epistle (N.): a long, serious letter on an important subject
epilogue (N.): a speech at the end of a book/play/film, that acts as a conclusion to what has happened
12. (b) **entomology** শ্রীচন্দ্র
entomology (N.): the scientific study of insects/worms
taxidermy (N.): the art of stuffing dead animals, birds and fish with a special material so that they may look like living ones and can be displayed
ornithology (N.): the scientific study of birds
paleontology (N.): the study of fossils (the remains of animals or plants in rocks)
13. (a) **altruist**
altruist (N.): someone who makes charitable donations intended to increase human wellbeing
hermit (N.): a person who, usually for religious reasons, lives a very simple life alone and does not meet or talk to other people
volunteer (N.): a person who does a job without being paid for it; a person who offers to do something without being forced to do it
martyr (N.): a person who suffers very much or is killed because of his religious/political beliefs
14. (a) **illegible** শ্রীচন্দ্র
illegible (Adj.): difficult/impossible to read
inedible (Adj.): that cannot be eaten because it is of poor quality/poisonous
illegal (Adj.): not allowed by the law
illicit (Adj.): not allowed by law; illegal
15. (d) **benign (Adjective):** kind and gentle; not hurting anybody; not dangerous or likely to cause death
malicious (Adjective): spiteful; malevolent; having/showing hatred and a desire to harm/hurt
malevolent (Adjective): malicious; wicked; having/showing desire to harm other people
spiteful (Adjective): malicious
baneful (Adjective): evil/causing evil
16. (c) **meagre (Adjective):** paltry; small in quantity and poor in quality
ample (Adjective): enough/more than enough; plenty of; large; sufficient
sufficient (Adjective): enough; sufficient
minimal (Adjective): very small in size/amount ; as small as possible শ্রীচন্দ্র
optimal (Adjective): the best possible ; ideal
17. (d) **straight (Adjective):** not bent or twisted
crooked (Adjective): not in a straight line; bent/twisted ; annoyed
twisted (Adjective): bent ; not normal; strange in an unpleasant way
devious (Adjective): behaving in a dishonest/indirect way; deceitful
bended (Adjective): not straight (of the back and knees)
18. (d) **nine days' wonder :** a person/thing that makes people excited for a short time but does not last very long শ্রীচন্দ্র
 ● The elopement of Bob and Anne was a **nine days' wonder**.
 The best option is **a dazzling short-lived spectacle of no real value**.
19. (d) **come to light :** to become known to people
 ● New evidence has recently come to light.
 The best option is **been revealed**.
20. (d) **not see eye to eye with somebody :** to not share the same views as somebody about something.
 ● The two of them have **never seen eye to eye** on politics.
 The best option is **to have the same opinion**.
21. (c) The correctly spelt word is **budgetary**.
 22. (c) The correctly spelt word is **pedestrian**.
 23. (a) The correctly spelt word is **embarrassed**.
 24. (b) **besides (Prep.):** in addition to Here, **besides** is the right usage.
25. (c) Here, **the best** is the right usage.
 26. (a)
27. (b) $520 : 738 :: 222 : 350$ শ্রীচন্দ্র

$$\begin{array}{cccc} \downarrow & \downarrow & \downarrow & \downarrow \\ 8^3+8 & 9^3+9 & 6^3+6 & 7^3+7 \end{array}$$
28. (c) $4 \ 2 \ 3 : 6 \ 5 \ 7 :: 5 \ 3 \ 4 : 7 \ 6 \ 8$

$$\begin{array}{ccccccc} & & & +2 & & & \\ & & & \uparrow & & & \\ & & & +3 & & & \\ & & & \uparrow & & & \\ & & & +4 & & & \\ & & & \uparrow & & & \end{array} \quad \begin{array}{ccccccc} & & & +2 & & & \\ & & & \uparrow & & & \\ & & & +3 & & & \\ & & & \uparrow & & & \\ & & & +4 & & & \end{array}$$
29. (a)
 30. (d) 'Nurse' receives instructions from 'Doctor' and follows. Similarly, 'Follower' receives instructions from 'Leader' and follows.

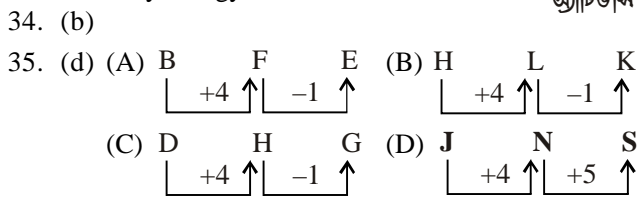
31. (d) 'Umpire' gives decision in the 'Match'. Similarly, 'Judge' gives decision in the 'Lawsuit'.

শ্রুতিভঙ্গি



33. (c) The study of 'Brain' is called 'Neurology'. Similarly, the study of 'Body' is called 'Physiology'.

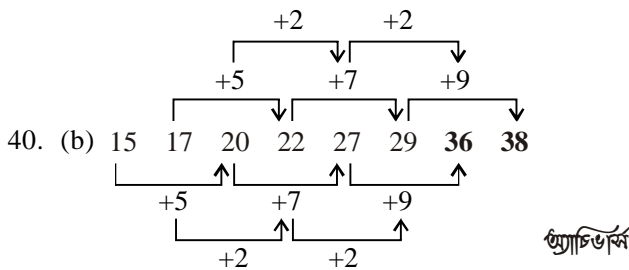
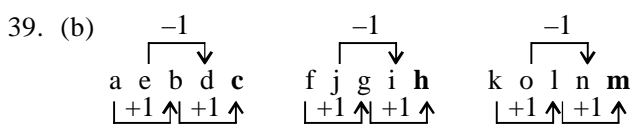
শ্রুতিভঙ্গি



36. (c) Except option (C) all others are the places of animals to stay.

37. (d) Except option (D) all other teach a particular subject.

38. (b) Except option (B) all others are parts of a vehicle.

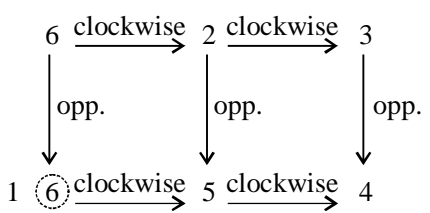


শ্রুতিভঙ্গি

41. (b) Deva > Shiva > Meena = Mani > Sudha

42. (b)

43. (c) According to dice I and III



44. (a) Rule \Rightarrow Minute = $\frac{2}{11} (H_1 \times 30 \pm A^\circ)$
 Here $H_1 = 8$ and $A^\circ = 0$

(When both the hands meet each other then 0° angle is made)

$$= \frac{2}{11} (8 \times 30 \pm 0)$$

শ্রুতিভঙ্গি

$$= \frac{2}{11} (240 \pm 0)$$

$$= \frac{480}{11} = 43 \frac{7}{11} \text{ Minute}$$

So, at 8 O'clock $43 \frac{7}{11}$ minutes both the hands will meet each other.

45. (c) $(5 \times 6) - 7 = 23$

$$(4 \times 5) - 6 = 14$$

Similarly,

$$(3 \times 4) - 5 = 7$$

46. (c) $4 + 5 = 9, 4 \times 5 = 20$

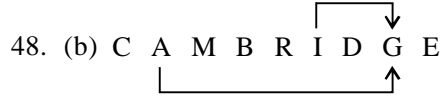
$$6 + 7 = 13, 6 \times 7 = 14$$

Similarly,

$$7 + 8 = 15, 7 \times 8 = 56$$

শ্রুতিভঙ্গি

47. (c)



49. (a)

50. (d)

51. (d) The smallest number of 5 digits = 10000
 Now,

$$\begin{array}{r} 476 \overline{)10000(21} \\ \underline{952} \\ 480 \\ \underline{476} \\ 4 \end{array}$$

$$\therefore \text{Required number} = 10000 + (476 - 4) = 10000 + 472 = 10472$$

52. (b) On making denominators equal,

$$\frac{3}{5} = \frac{3 \times 3}{5 \times 3} = \frac{9}{15}$$

$$\frac{2}{3} = \frac{2 \times 5}{3 \times 5} = \frac{10}{15}$$

$$\frac{11}{15} = \frac{11}{15}$$

শ্রুতিভঙ্গি

$$\therefore \frac{9}{15} < \frac{10}{15} < \frac{11}{15}$$

$$\Rightarrow \frac{3}{5} < \frac{2}{3} < \frac{11}{15}$$

53. (d) Runs scored in the next innings = x (let)

According to the question,

$$10 \times 32 + x = 11 \times 38$$

$$\Rightarrow 320 + x = 418$$

$$\Rightarrow x = 418 - 320 = 98$$

54. (a) Milk : Water = K : 1

$$\therefore \text{S.P.} = (K + 1) \times 9$$

$$\text{C.P.} = 10K$$

$$\text{Gain} = 9 - K$$

$$\text{Gain \%} = \frac{9 - K}{10K} \times 100$$

$$\Rightarrow \frac{9 - K}{10K} \times 100 = 20$$

$$\Rightarrow 90 - 10K = 20K$$

$$\Rightarrow 30K = 90 \Rightarrow K = 3$$

$$\therefore \text{Ratio} = 3 : 1$$

55. (b) A : B : C =
- $\frac{1}{2} : \frac{2}{3} : \frac{3}{4}$

$$= \left(\frac{1}{2} \times 12\right) : \left(\frac{2}{3} \times 12\right) : \left(\frac{3}{4} \times 12\right) = 6 : 8 : 9$$

$$\text{Sum of the terms of ratio} = 6 + 8 + 9 = 23$$

$$\therefore \text{First part} = ₹ \left(\frac{6}{23} \times 782\right) = ₹ 204$$

56. (b) Since
- $1 < x < 2$
- , we have

$$x - 1 > 0 \text{ and}$$

$$x - 3 < 0$$

$$\text{or, } 3 - x > 0$$

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

$$= \sqrt{(x-1)^2} + \sqrt{(3-x)^2} [\because (x-3)^2 = (3-x)^2]$$

$$= x - 1 + 3 - x = 2$$

57. (a)
- $11^\circ 15'$

$$= 11^\circ + \frac{15^\circ}{60}$$

$$= 11^\circ + \frac{1}{4} = \frac{45^\circ}{4}$$

$$[\because 180^\circ = \pi^c]$$

$$\therefore \frac{45^\circ}{4} = \frac{\pi}{180} \times \frac{45}{4} = \frac{\pi^c}{16}$$

58. (c)
- $x = \sqrt{\frac{\sqrt{5}+1}{\sqrt{5}-1}} \times \frac{\sqrt{5}+1}{\sqrt{5}+1} = \sqrt{\frac{(\sqrt{5}+1)^2}{5-1}}$

$$= \sqrt{\frac{(\sqrt{5}+1)^2}{4}} = \frac{\sqrt{5}+1}{2}$$

$$\therefore 5x^2 - 5x - 1$$

$$= 5 \left(\frac{(\sqrt{5}+1)^2}{4} \right) - 5 \frac{(\sqrt{5}+1)}{2} - 1$$

$$= 5 \left(\frac{5+1+2\sqrt{5}}{4} \right) - \frac{5\sqrt{5}+5}{2} - 1$$

$$= 5 \left(\frac{3+\sqrt{5}}{2} \right) - \frac{5\sqrt{5}+5}{2} - 1$$

$$= \frac{15+5\sqrt{5}-5\sqrt{5}-5-2}{2}$$

$$= \frac{8}{2} = 4$$

59. (b)
- $\sec^2 \theta + \tan^2 \theta = 7$

$$\Rightarrow 1 + \tan^2 \theta + \tan^2 \theta = 7$$

$$\Rightarrow 2 \tan^2 \theta = 7 - 1 = 6$$

$$\Rightarrow \tan^2 \theta = 3$$

$$\Rightarrow \tan \theta = \sqrt{3}$$

$$= \tan 60^\circ$$

$$\Rightarrow \theta = 60^\circ$$

$$\therefore 180^\circ = \pi \text{ radian}$$

$$\therefore 60^\circ = \frac{\pi}{180} \times 60 = \frac{\pi}{3} \text{ radian}$$

60. (b) Expression

$$= \sqrt[3]{1 - \frac{127}{343}} = \sqrt[3]{\frac{343-127}{343}}$$

$$= \sqrt[3]{\frac{216}{343}} = \sqrt[3]{\frac{(6)^3}{(7)^3}} = \frac{6}{7} = 1 - \frac{1}{7}$$

61. (a)
- $\tan 15^\circ \cdot \cot 75^\circ + \tan 75^\circ \cdot \cot 15^\circ$

$$= \tan 15^\circ \cdot \cot (90^\circ - 15^\circ) + \tan (90^\circ - 15^\circ) \cdot \cot 15^\circ$$

$$\cot 15^\circ$$

$$= \tan^2 15^\circ + \cot^2 15^\circ \dots (i)$$

$$\left[\begin{array}{l} \because \tan(90^\circ - \theta) = \cot \theta \\ \cot(90^\circ - \theta) = \tan \theta \end{array} \right]$$

$$\tan 15^\circ = 2 - \sqrt{3}$$

$$\therefore \cot = 15^\circ$$

অ্যাপ্টিভার্স

অ্যাপ্টিভার্স

অ্যাপ্টিভার্স

অ্যাপ্টিভার্স

অ্যাপ্টিভার্স

অ্যাপ্টিভার্স

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

$$= 2+\sqrt{3}$$

$$\therefore \tan^2 15^\circ + \cot^2 15^\circ$$

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

$$= 2(4+3) = 14$$

প্র্যাচিভর্স

62. (d) $x = 7 - 4\sqrt{3}$

$$\therefore \frac{1}{x} = \frac{1}{7-4\sqrt{3}}$$

$$= \frac{1(7+4\sqrt{3})}{(7+4\sqrt{3})(7-4\sqrt{3})}$$

$$= \frac{7+4\sqrt{3}}{49-48} = 7+4\sqrt{3}$$

$$\therefore x + \frac{1}{x}$$

$$= 7 - 4\sqrt{3} + 7 + 4\sqrt{3} = 14$$

প্র্যাচিভর্স

63. (b) $a : b = \frac{2}{9} : \frac{1}{3} = 2 : 3$

$$b : c = \frac{2}{7} : \frac{5}{14} = 4 : 5$$

$$d : c = \frac{7}{10} : \frac{3}{5} = 7 : 6$$

$$\Rightarrow c : d = 6 : 7$$

Thus,

$$a : b = 2 : 3$$

$$b : c = 4 : 5$$

$$c : d = 6 : 7$$

$$\frac{a : b : c : d = 2 \times 4 \times 6 : 3 \times 4 \times 6 : 3 \times 5 \times 6 : 3 \times 5 \times 7}{3 \times 5 \times 6 : 3 \times 5 \times 7}$$

$$= 16 : 24 : 30 : 35$$

প্র্যাচিভর্স

64. (c) $\frac{a}{3} = \frac{b}{4} = \frac{c}{7} = k$ (Let)

$$a = 3k, b = 4k, c = 7k$$

$$\therefore \frac{a+b+c}{c} = \frac{3k+4k+7k}{7k}$$

$$= \frac{14k}{7k} = 2$$

65. (b) Let the number of terms be n , then

$$\text{By } t_n = a + (n-1)d$$

$$85 = 5 + (n-1)$$

$$\Rightarrow n-1 = 85-5 = 80$$

প্র্যাচিভর্স

$$\Rightarrow n = 81$$

$$\therefore \sin^2 5^\circ + \sin^2 6^\circ + \dots + \sin^2 45^\circ + \dots + \sin^2 84^\circ + \sin^2 85^\circ$$

$$= (\sin^2 5^\circ + \sin^2 85^\circ) + (\sin^2 6^\circ + \dots + \sin^2 84^\circ)$$

$$+ \dots + \text{to } (40 \text{ terms}) + \sin^2 45^\circ$$

$$= (\sin^2 5^\circ + \cos^2 5^\circ) + (\sin^2 6^\circ + \dots + \cos^2 6^\circ)$$

$$+ \dots + \text{to } 40 \text{ terms} + \sin^2 45^\circ$$

$$\left[\begin{array}{l} \sin(90^\circ - \theta) = \cos \theta \\ \sin^2 \theta + \cos^2 \theta = 1 \end{array} \right]$$

$$= 40 + \left(\frac{1}{\sqrt{2}}\right)^2 = 40 + \frac{1}{2} = 40\frac{1}{2}$$

66. (b) $\frac{\sqrt{7}-2}{\sqrt{7}+2} = \frac{\sqrt{7}-2}{\sqrt{7}+2} \times \frac{\sqrt{7}-2}{\sqrt{7}-2}$

(Rationalising the denominator)

$$= \frac{(\sqrt{7}-2)^2}{7-4} = \frac{7+4-4\sqrt{7}}{3}$$

প্র্যাচিভর্স

$$= \frac{11}{3} - \frac{4\sqrt{7}}{3}$$

$$\therefore \frac{\sqrt{7}-2}{\sqrt{7}+2} = a\sqrt{7} + b$$

$$\Rightarrow \frac{11}{3} - \frac{4}{3}\sqrt{7} = a\sqrt{7} + b$$

Clearly,

$$a = -\frac{4}{3} \text{ and } b = \frac{11}{3}$$

67. (a) Cost Price = ₹ x

$$\text{S.P.} = \frac{120x}{100} = ₹ \frac{6x}{5}$$

$$\text{Gain} = ₹ \frac{x}{5}$$

\therefore Required gain per cent

প্র্যাচিভর্স

$$= \frac{\frac{x}{5}}{\frac{6x}{5}} \times 100$$

$$= \frac{100}{6} = \frac{50}{3} = 16\frac{2}{3}\%$$

68. (b) In radius = $\frac{\text{Side}}{2\sqrt{3}}$
 $\Rightarrow 3 = \frac{\text{Side}}{2\sqrt{3}} \Rightarrow \text{Side} = 3 \times 2\sqrt{3} = 6\sqrt{3}$ cm

69. (a) $\frac{1}{12}$ hectare = $\frac{1}{12} \times 10000$ sq. metre
 = $\frac{2500}{3}$ sq. metre

প্র্যাচিভর্ক

$\therefore 3x \times 4x = \frac{2500}{3}$
 $\Rightarrow x^2 = \frac{2500}{3 \times 3 \times 4} \Rightarrow x = \frac{50}{6}$

$\Rightarrow \text{Width} = 3x = 3 \times \frac{50}{6} = 25$ metre

70. (a) $x = \frac{\sqrt{3}+1}{\sqrt{3}-1}$
 $= \frac{\sqrt{3}+1}{\sqrt{3}-1} \times \frac{(\sqrt{3}+1)}{(\sqrt{3}+1)}$
 $= \frac{(\sqrt{3}+1)^2}{3-1} = \frac{3+1+2\sqrt{3}}{2}$
 $= \frac{4+2\sqrt{3}}{2} = 2+\sqrt{3}$

প্র্যাচিভর্ক

Similarly,

$y = \frac{\sqrt{3}-1}{\sqrt{3}+1} = 2-\sqrt{3}$
 $\therefore x^2 + y^2 = (2+\sqrt{3})^2 + (2-\sqrt{3})^2$
 $= 4+3+4\sqrt{3}+4+3-4\sqrt{3} = 14$

71. (c) Let the sum be P.
 As, the interest is compounded half-yearly,
 $\therefore R = 2\%$, $T = 2$ half years

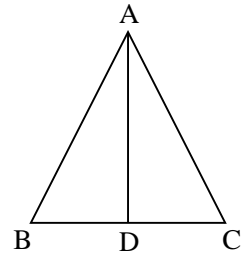
$\therefore A = P \left(1 + \frac{R}{100}\right)^T$
 $\Rightarrow 7803 = P \left(1 + \frac{2}{100}\right)^2$
 $\Rightarrow 7803 = P \left(1 + \frac{1}{50}\right)^2$

প্র্যাচিভর্ক

$\Rightarrow 7803 = P \times \frac{51}{50} \times \frac{51}{50}$
 $\Rightarrow P = \frac{7803 \times 50 \times 50}{51 \times 51} = ₹ 7500$

72. (b)

প্র্যাচিভর্ক



$AB = AC = 2a$ units
 $BC = a$ units

$BD = DC = \frac{a}{2}$ units

$AD = \sqrt{AB^2 - BD^2}$
 $= \sqrt{4a^2 - \frac{a^2}{4}} = \sqrt{\frac{15a^2}{4}}$
 $= \sqrt{\frac{15}{2}} a$ units

প্র্যাচিভর্ক

73. (b) C.P of article

$= \frac{100}{100-20} \times 450$
 $= \frac{100 \times 450}{80} = ₹ 562.5$

\therefore To gain 20%

S.P. = $\frac{562.5 \times 120}{100} = ₹ 675$

74. (b) $\sqrt{1 + \frac{x}{9}} = \frac{13}{3}$

Squaring both sides,

$1 + \frac{x}{9} = \frac{169}{9}$
 $\Rightarrow \frac{x}{9} = \frac{169}{9} - 1 = \frac{160}{9}$
 $\Rightarrow x = \frac{160}{9} \times 9 = 160$

প্র্যাচিভর্ক

75. (b) C.I. = $P \left(1 + \frac{r}{100}\right)^t - P$

$2448 = P \left[\left(1 + \frac{r}{100}\right)^t - 1 \right]$

$$\text{or } 2448 = P \left[\left(1 + \frac{4}{100} \right)^2 - 1 \right]$$

$$= 2448 = P \left[\frac{676}{625} - 1 \right]$$

$$\Rightarrow 2448 = P \left[\frac{51}{625} \right] \quad \text{শ্রীচিভর্ষ$$

$$\therefore P = \frac{2448 \times 625}{51}$$

$$P = ₹ 30,000$$

$$\therefore \text{S.I.} = \frac{30000 \times 4 \times 2}{100} = ₹ 2400$$

76. (a) The Silk Road or Silk Route is a modern term referring to a historical network of interlinking trade routes across the Afro-Eurasian landmass that connected East, South, and Western Asia with the Mediterranean and European world, as well as parts of North and East Africa. Extending 6,500 km, the Silk Road gets its name from the lucrative Chinese silk trade along it, which began during the Han Dynasty (206 BC – 220 AD). The Kushan empire incorporated Samarkand, Bokhara and Fergana, bordering on the Silk Road towns of Kashgar, Yarkand and Khotan. The main route from Central Asia into India, connecting India with the Silk Roads and the Mediterranean, ran through Gandhara. Kanishka sought to promote the thriving trade with the Silk Road centres like Kashgar and beyond, sending an envoy to Ttajan in Rome.
77. (c) The outermost layer of the sun is the corona. Only visible during eclipses, it is a low density cloud of plasma with higher transparency than the inner layers. The white corona is a million times less bright than the inner layers of the sun, but is many times larger. A corona is a type of plasma “atmosphere” of the Sun or other celestial body, extending millions of kilometers into space, most easily seen during a total solar eclipse, but also observable in a coronagraph. শ্রীচিভর্ষ
78. (d) Optical fibres are used in endoscopic instruments that enable doctors to view internal body parts without having to perform surgery. Fernando Alves Martins of Portugal invented the first fiber optic endoscope in 1963-64.
79. (c) These religious establishments could have received royal patronage from various dynasties, even though inscriptional evidences

are lacking for most of them. The only definite inscriptional evidence is that of Rashtrakuta Dantidurga (c. 753-57 A.D.) The majority of the Brahmanical establishments and the remaining Buddhist ones can be attributed to the Rashtrakuta times which indicate the religious tolerance of the contemporary period. The Jaina caves definitely postdate the Rashtrakutas as indicated by the style of execution and fragmentary inscriptions. This region was under the control of Kalyani Chalukyas and Yadavas of Deogiri (Daulatabad) during this period.

80. (d) The International Date Line (IDL) is an imaginary line on the surface of the Earth, that runs from the north to the south pole and demarcates one calendar day from the next. It passes through the middle of the Pacific Ocean, roughly following the 180° longitude but it deviates to pass around some territories and island groups. শ্রীচিভর্ষ
81. (a) Dr. Rajendra Prasad was elected president of the Constituent Assembly while B.R. Ambedkar was appointed the Chairman of the Drafting Committee.
82. (d) The Head Quarter of Serum Institute of India located at Pune, Maharashtra.
83. (c) Taxila dates back to the Gandhara period when it was an important Hindu and Buddhist centre, and is still considered a place of religious and historical sanctity in those traditions. Gandhara art was a style of Buddhist visual art that developed in what is now northwestern Pakistan and eastern Afghanistan between the 1st century B.C and the 7th century A.D. The style, of Greco-Roman origin, seems to have flourished largely during the Kushana dynasty.
84. (c) When the glaciers melt, the tributary troughs are left as hanging valleys high on the walls of the main glacial valley. A hanging valley is a tributary valley with the floor at a higher relief than the main channel into which it flows. They are most commonly associated with U-shaped valleys when a tributary glacier flows into a glacier of larger volume. শ্রীচিভর্ষ
85. (a) The Zener diode is like a general-purpose signal diode. When biased in the forward direction it behaves just like a normal signal diode, but when a reverse voltage is applied to it, the voltage remains constant for a wide range of currents and hence widely used for regulated electric supply. The device was named after

- Clarence Zener, who discovered this electrical property. Many diodes described as “Zener” diodes rely instead on avalanche breakdown as the mechanism. Common applications include providing a reference voltage for voltage regulators, or to protect other semiconductor devices from momentary voltage pulses. Zener diodes are widely used as voltage references and as shunt regulators to regulate the voltage across small circuits. অ্যাজিভিক্স
86. (d) The right to property, also known as the right to protection of property, is a human right and is understood to establish an entitlement to private property. Right to property was originally a fundamental right, but is now a legal right. অ্যাজিভিক্স
87. (a) National Income is defined as the sum total of all the goods and services produced in a country, in a particular period of time. Normally this period consists of one year duration, as a year is neither too short nor long a period. National product is usually used synonymous with National income. The Central Statistical Organization defines National income as “National Income is the sum of factor income earned by the normal residents of a country in the form of wages, rent, interest and profit in an accounting year.”
88. (b) Isa Muhammad Effendi or Ustad Isa was a Persian architect from Iran he and his colleague Ismail Effendi entered the service of the Mughal Emperor Shah Jahan after the Ottoman Sultan Murad IV and the Mughals exchanged ambassadors. Isa Muhammad Effendi is often described as the chief architect of the Taj Mahal. Recent research suggests the Persian architect, Ustad Ahmad Lahauri was the most likely candidate as the chief architect of the Taj, an assertion based on a claim made in writings by Lahauri’s son Lutfullah Muhandis. অ্যাজিভিক্স
89. (a) Indian Standard Time (IST) is the time observed throughout India and Sri Lanka, with a time offset of UTC+05:30. India does not observe Daylight Saving Time (DST) or other seasonal adjustments. In military and aviation time IST is designated E* (“Echo-Star”). Indian Standard Time is calculated on the basis of 82.5° E longitude, from a clock tower in Mirzapur (25.15°N 82.58°E) (near Allahabad in the state of Uttar Pradesh) which is nearly on the corresponding longitude reference line.
90. (c) A growth fertilizer will have a high N content and relatively low P and K content. Ammonium nitrate is the highest Nitrogen fertilizer you can buy, and it is potent stuff. It is usually rated as 33-0-0 or 34-0-0. The bag contains 33% or 34% Nitrogen and the other 66% or 67% is inert material. Other formulations of growth fertilizers will contain 5, 6 or even 7 times more Nitrogen than anything else.
91. (a) The Preventive Detention Act was enacted in 1950 to provide for preventive detention in certain cases and matter connected therewith. It empowered the government to imprison a person in jail or put him to custody either for committing a crime or in the apprehension of committing a crime in future. It curtailed Right to freedom contained in Articles 19, 20, 21, 21A and 22. Clauses (4) to (7) of Article 22 contain safeguards relating to preventive detention matter. অ্যাজিভিক্স
92. (b) Govt. of Assam will rollout the 'Orunodoi' scheme which will provide financial assistance of Rs. 830 per month through Direct Benefit Transfer (DBT) scheme to around 17 lakh families in the states.
93. (d) The Delhi Sultanate is a term used to cover five short-lived dynasties, Delhi based kingdoms or sultanates, mostly of Turkic and Pashtun (Afghan) origin in medieval India. The sultanates ruled from Delhi between 1206 and 1526, when the last was replaced by the Mughal dynasty. The five dynasties were the Mamluk dynasty (1206–90); the Khilji dynasty (1290–1320); the Tughlaq dynasty (1320–1414); the Sayyid dynasty (1414–51); and the Afghan Lodi dynasty (1451–1526). The Mamluk Dynasty or Slave Dynasty, directed into India by Qutb-ud-din Aibak, a Turkish general of Central Asian birth, was the first of five unrelated dynasties to rule India’s Delhi Sultanate from 1206 to 1290. অ্যাজিভিক্স
94. (b) The Malabar Coast is a long and narrow coastline on the south-western shore line of the mainland Indian subcontinent. In historical contexts, refers to India’s southwestern coast, lying on the narrow coastal plain of Karnataka and Kerala states between the Western Ghats range and the Arabian Sea. Kerala is located on the Malabar coast. অ্যাজিভিক্স
95. (d) Table salt is refined salt, which contains about 97 to 99 percent sodium chloride. It usually contains substances that make it free-flowing

- (anticaking agents) such as sodium aluminosilicate or magnesium carbonate. Because of Hygroscopic nature of salt it become wet in rainy season as the salt absorbs moisture from environment. শ্রীচিভর্ষ
96. (c) Domestic saving primarily consist of three components, viz., household sector saving, private corporate sector saving and public sector saving. Household sector saving constitutes the largest portion of gross domestic saving. Household sector saving comprises saving in financial assets and saving in physical assets. Household saving in financial assets (net) is estimated as gross financial assets net of financial liabilities, while household saving in physical assets is the net addition to physical assets by the households. Gross financial saving of the household sector include the saving in the form of currency, bank deposits, non-bank deposits, saving in life insurance fund, saving in provident and pension fund, claims on government, shares and debentures inclusive of investment in mutual funds and net trade.
97. (d) One of the main messages of Swami Dayanand Saraswati was for Hindus to go back to the roots of their religion, which are the Vedas. By doing this, he felt that Hindus would be able to improve the depressive religious, social, political, and economic conditions prevailing in India in his times. শ্রীচিভর্ষ
98. (a) Zoji La is a high mountain pass in India, located on the Indian National Highway 1 between Srinagar and Leh in the western section of the Himalayan mountain range. Zoji La provides a vital link between Ladakh and Kashmir. It runs at an elevation of approximately 3,528 metres and is the second highest pass after Fotu La on the Srinagar-Leh National Highway.
99. (c) Uranium is used to produce a chemical and nuclear reaction which produce a lot of heat. This heat is used to turn water into steam, which turns turbines...turbines generate electricity. শ্রীচিভর্ষ
100. (b) Membership is limited to 250 members, 12 of whom are nominated by the President of India for their contributions to art, literature, science, and social services. The remainder of the body is elected by the state and territorial legislatures. Terms of office are six years, with one third of the members retiring every two years.