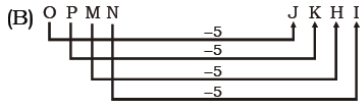
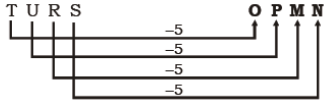


HSSC MOCK TEST – 4 (SOLUTION)

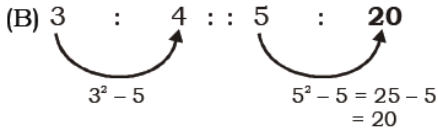
1.



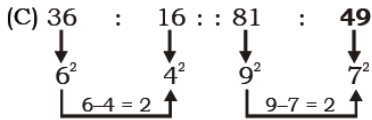
Similarly,



2.



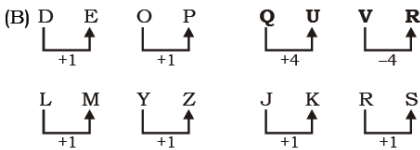
3.



4.

(B) Mosque is the holy place for Muslims and Gurudwara is the holy place for Sikhs.

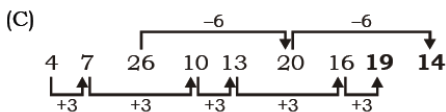
5.



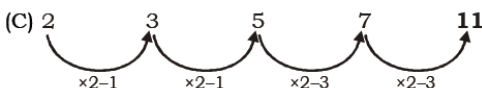
6.

(C) $19-33 \neq 33-19 = 14$ [Multiple of 7]
 $24-45 \neq 45-24 = 21$ [" " "]
 $16-23 \neq 23-16 = 7$ [" " "]
 $35-62 \neq 62-35 = 27$ @ not a multiple of 7.

7.

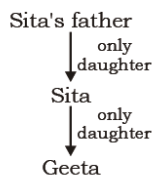


8.



9.

(D) None of these



We can clearly say that Sita is the mother of Geeta.

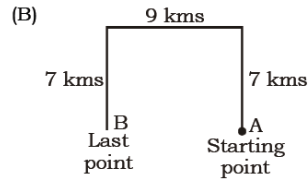
10.

(A) $40 + 36 + (2) = 78$
 $41 + 54 + (2) = 97$
 $26 + 37 + (2) = 65$

11.

(A) $3^2 + 1 = 10$
 $5^2 + 1 = 26$
 $7^2 + 1 = 50$
 $9^2 + 1 = 82$

12.

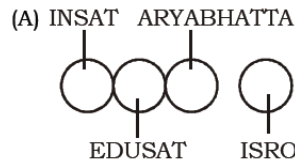


\ Required distance = AB = 9 kms

13.

(C) After interchanging the signs, we have
 $200 - (180 \div 90) + (12 \times 6)$
 $= 200 - 2 + 72$
 $= 272 - 2$
 $= 270$

14.



51.

(B) C.P of 1st transistor = $\frac{100}{120} \times 840 = ₹ 700$

C.P of 2nd transistor = $\frac{100}{96} \times 960 = ₹ 1000$

So, total C.P = $(700 + 1000) = ₹ 1700$

Total S.P = $(840 + 960) = ₹ 1800$

\ Gain % = $\frac{100}{1700} \times 100 \% = 5\frac{15}{17} \%$

52.

(B) Let the thickness of the bottom be x cm
 Then, $[(330 - 10) \times (260 - 10) \times (110 - x)]$
 $= 8000 \times 1000$

$320 \times 250 \times (110 - x) = 8000 \times 1000$

$(110 - x) = \frac{8000 \times 1000}{320 \times 250} = 100$

$x = 10 \text{ cm} = 1 \text{ dm}$

53.

(D) L.C.M of 252, 308 and 198 = 2772

So, A, B and C will again meet at the starting point in 2772 sec. i.e., 46 min 12 sec.

54.

(C) Let the speed upstream be x km/h and that downstream be y km/h.

Then, distance covered upstream in 8 hrs 48 min
= Distance covered downstream in 4 hrs

$$x \times 8 \frac{4}{5} = (y \times 4)$$

$$\frac{44}{5}x = 4y$$

$$y = \frac{11}{5}x$$

$$\text{Required ratio} = \frac{y+x}{2} : \frac{y-x}{2}$$

$$= \frac{16x}{5} \times \frac{1}{2} : \frac{6x}{5} \times \frac{1}{2}$$

$$= \frac{8}{5} : \frac{3}{5} = 8 : 3$$

55.

(A) Number of valid votes = 80% of 9000 = 7200
Valid votes polled for other candidate = 45%
of 7200

$$= \frac{45}{100} \times 7200 = 3240$$

56.

(A) $2(A + B + C)$'s 1 day's work

$$= \frac{1}{30} + \frac{1}{24} + \frac{1}{20} = \frac{15}{120} = \frac{1}{8}$$

Therefore, $(A + B + C)$'s 1 day's work

$$= \frac{1}{2 \times 8} = \frac{1}{16}$$

$$\text{Work done by A, B, C in 10 days} = \frac{10}{16} = \frac{5}{8}$$

$$\text{Remaining work} = 1 - \frac{5}{8} = \frac{3}{8}$$

$$\text{A's 1 day's work} = \frac{1}{16} - \frac{1}{24} = \frac{1}{48}$$

Now, $\frac{1}{48}$ work is done by A in 1 day.

$$\text{So, } \frac{3}{8} \text{ work will be done by A in } 48 \times \frac{3}{8} \\ = 18 \text{ days.}$$

57.

$$(C) \text{ C.I.} = 4000 \times \left[1 + \frac{10}{100} \right]^2 - 4000$$

$$= 4000 \times \frac{11}{10} \times \frac{11}{10} - 4000 = ₹ 840$$

$$\text{Sum} = \frac{420 \times 100}{3 \times 8} = ₹ 1750$$

58.

(A) Originally, let the number of seats for Mathematics, Physics and Biology be $5x$, $7x$ and $8x$ respectively.

Number of increased seats are (140% of $5x$), (150% of $7x$) and (175% of $8x$).

$$\frac{140}{100} \times 5x, \frac{150}{100} \times 7x \text{ and } \frac{175}{100} \times 8x$$

$$7x, \frac{21x}{2} \text{ and } 14x.$$

$$\text{The required ratio} = 7x : \frac{21x}{2} : 14x$$

$$14x : 21x : 28x \\ 2 : 3 : 4$$

59.

(D) Let CP be the cost price, MP be the marked price and SP be the selling price

SP = 80% of MP = 88% of CP (12% loss)

MP = 1.1 CP

now if SP = 95% of MP = 95% of 1.1 CP = 1.045 CP

profit = 1.045 CP - CP = 0.045 CP = 4.5%

60.

$$(B) a^2 + a + 1 = 0 \Leftrightarrow (a-1)(a^2 + a + 1) = 0(a-1)$$

$$a^3 - 1 = 0 \Leftrightarrow a^3 = 1$$

$$(a^3)^3 = 1^3 = a^9 = 1$$

$$a^9 + 2 = 3$$

