

NAME: AWAIS RIAZ

BATCH: 367

GSA - MOCK

SECTION B

QUESTION 6

- (a) depreciating rate = 10% per year
present value = 8748 Rs.
price 3 yrs ago = ?

$$\frac{8748}{0.9} = \text{price (1 year ago)}$$

$$9720 \text{ Rs.} = \text{price}$$

$$\begin{aligned} 2 \text{ years before} &= \frac{9720}{0.9} \\ &= 10800 \text{ Rs.} \end{aligned}$$

$$3 \text{ years before Price} = \frac{10800}{0.9}$$

Price = 12000 Rs. (3 yrs ago)

- (b) let father's present age = y

daughter's " " = x

$$y = 4x \quad \text{--- ①}$$

after 5 yrs: $y + 5 = 3(x + 5)$ --- ②
given

now putting ① in ②

$$\begin{aligned} 4x + 5 &= 3x + 15 \quad \rightarrow \quad x = 10 \text{ yrs} \\ y &= 40 \text{ yrs} \end{aligned}$$

daughter's present age = 10 yrs

father's // // = 40 yrs

after 10 yrs :

father's age = 50 yrs

daughter's age = 20 yrs

Father's age after 10 yrs would be

2.5 times of his daughter's age.

(c) diameter of football = 12 cm

$$\text{radius} = \frac{12}{2}$$

$$r = 6 \text{ cm}$$

$$\text{Volume of Football} = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \times \pi \times 6^3$$

$$= \frac{4}{3} \times \pi \times 216$$

$$\text{Volume of Football} = 288\pi \text{ cm}^3 \approx 904.9 \text{ cm}^3$$

(d) Length of first train = L_1

// // second // = L_2

Speed of first train = S_1

// // second // = S_2

$$s_1 = \frac{L_1}{t}$$

$$s_2 = \frac{L_2}{17}$$

} time to cross man

$$\frac{L_1 + L_2}{s_1 + s_2} = 23 \quad \text{time to cross each other.}$$

$$L_1 = s_1(27)$$

$$L_2 = s_2(17)$$

$$27s_1 + 17s_2 = 23(s_1 + s_2)$$

$$27s_1 + 17s_2 = 23s_1 + 23s_2$$

$$4s_1 = 6s_2$$

$$\frac{s_1}{s_2} = \frac{6}{4}$$

Ratio = 3:2
 $s_1 : s_2$

$$\frac{s_1}{s_2} = \frac{3}{2}$$

QUESTION 7

(a) Average of 7 consecutive numbers is 20.

Let consecutive numbers be:

$$x, x+1, x+2, x+3, x+4, x+5, x+6.$$

$$x + x+1 + x+2 + x+3 + x+4 + x+5 + x+6 = 20$$

$$7x + 21 = 20(7)$$

$$7x = 140 - 21 \quad \therefore \text{Largest number}$$

$$7x = 119 \quad = 17+6$$

$$x = 17 \quad \boxed{= 23}$$

(b)

B and C are cousins

(c)

(i)

48

(ii)

226

(iii)

163

(iv)

289

(v)

3104

Follow step by step method
Attempt whole paper at least