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## Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.
5. Calculator is not allowed.

## Q. 1 Do as Directed.

A). Multiple choice type questions/Fill in the blanks. (Each of 1 mark)

1. WFB, TGD, QHG, ?
a) NIJ
c) NIK
b) NJK
d) OIK

2 DIVA: OPERA
a) producer: theatre
c) conductor: bus
b) director: drama
d) thespian: play

3 How many terms are there in the A.P. $15,21,27, \ldots \ldots \ldots, 285$.
a) 10
b) 50
c) 46
d) 55

4 Find the number of factors of 120.
a) 15
b) 16
c) 14
d) 18

5 Find the $7^{\text {th }}$ term of the G.P. $4,8,16, \ldots \ldots$
a) 250
b) 252
c) 254
d) 256
B). Define the following. (Each of 1 mark)

1. Identify the mode for the following data set: $21,19,62,21,66,28,66,48,79,59,28,62,63$, $63,48,66,59,66,94,79,19,94$
2. Which is the next number in the G.P. $3,6,12,24,48 \ldots$
3. $5863 \times 9999$
4. Write the formula of Compound interest.
5. Find HCF of 360 and 132.
C). Direct questions. (Each of 1 mark)
6. $\frac{\mathbf{1}}{\mathbf{4}}$ of a number is subtracted from $\frac{\mathbf{1}}{\mathbf{3}}$ of the same number gives 12 then the number is.....
7. Find square root of 4356 .
8. Find cube root of 42875 .
9. Find simple interest of 6000 for 3 years at $5 \%$ per annum.
10. $(1014)^{2}=$ $\qquad$
Q. 2 Answer the following questions.
A). 1. If 2 persons are going to market from same place with the speed of $75 \mathrm{~km} / \mathrm{hr}$ and $80 \mathrm{~km} / \mathrm{hr}$ respectively then what is the average speed of them?
11. Find square root of following:
(i) $\frac{9604}{625}$
(ii) $\frac{3364}{484}$
(iii) $\frac{354}{43}$
(iv) $\frac{9801}{\mathbf{1 0 0 0 0}}$
B). Rearrange these words to form meaningful words (Each 1 marks)

Ex. okrw - Work

1. ginsde $\qquad$
2. aing
3. Inap
4. pemroot $\qquad$
5. ranit
6. grinsoea $\qquad$
7. engmaa $\qquad$

## Q. 3 Answer the following questions.

A). 1. In Parul Institute of Business Administrative has 3 divisions of semester 4 the number of students in them are 242, 198 and 110 respectively. Their average marks of BS-II are 69, 75 and 72 respectively then find out the average marks of whole college
2. If $96,94,104,110, \mathbf{b}, 102,98$ are observations and average of these observations are 100 then find the value of $\mathbf{b}$.
B). 1. Suresh has started travelling from Vadodara first he travelled 240 km on bike with the speed of $50 \mathrm{~km} / \mathrm{hr}$, then he travelled 320 km in train which has speed of $110 \mathrm{~km} / \mathrm{hr}$ and then he travelled 100 km in bus which has speed of $90 \mathrm{~km} / \mathrm{hr}$ and reached to his destination find out the average speed of him to reach his destination.
2. If ball is fallen from the height of 540 m and ratio of its bounce is $\frac{2}{3}$ then find out the total distance covered by ball.
Q.4 Attempt any two questions. (Each of 7.5 mark)

1 I. What is the unit digit in $\left\{(6374)^{1793} \mathrm{x}(625)^{317} \mathrm{x}(3414)^{91}\right\}$ ? .
II. What is the $117^{\text {th }}$ term of an A.P. $6,16,26,36 \ldots \ldots$
a) 846
b) 856
c) 866
d) 1166
III. Find greatest number that will divide 148, 243 and 623 which will leave remainders 4, 6 and 11 respectively.
2 Write FAQs of interview and their suitable answers.
3 Find the amount of Rs. 8000 in 1.5 years at $5 \%$ per annum compound interest payable half yearly.
4 The average of n numbers is 78 . If each of $60 \%$ of the numbers is increased by 16 and each of the remaining number is decreased by 9 , then the new average of the numbers is ?

