

**VidyaVikasMandal's**  
**Shree Damodar College of Commerce & Economics Margao Goa**  
**F.Y.BBA (FS), Semester I, End Semester Examination, October 2015**

**Duration: 2 Hours**

**QUANTITATIVE SKILLS**

**Total Marks:60**

- Instructions:** 1) Figures to the right indicate maximum marks.  
 2) All questions are compulsory.  
 3) Non- scientific calculator is allowed.

Q1. A) Explain subdivided bar diagram. Draw subdivided bar diagram for each family in the following data: (6 marks)

Family	Food	Cloth	Rent	Misc.
A1	25	130	120	25
A2	20	100	130	50

B) Explain percentage bar diagram. Also, draw percentage bar diagram for each class in the following data: (6 marks)

Marks Class	2 <sup>nd</sup>	1 <sup>st</sup>	Distinction
V – VIII	35	21	10
IX – X	25	38	15
XI - XII	31	41	8

**OR**

X) Explain multiple bar diagram. Also, draw multiple bar diagram for each year in the following data: (6 marks)

No. of In year	Men	Women	Children
1966	45	35	20
1971	44	34	22
1976	48	36	16
1977	50	40	10

Y) Draw pie diagram for the following data: (6 marks)

Items	Expenditure
Food	240
Clothing	66
Rent	125
Fuel	57
Education	42
Miscellaneous	190

Q2. A) The sum of 4 numbers in A.P. is 32 and the sum of their square is 276. Find the numbers. (6 marks)

B) 3 numbers whose sum is 15 are in the A.P. if 12, 10, 8 are added to them respectively the resulting number are in G.P. find the numbers (6 marks)

OR

X) The sum of 3 numbers in G.P. is 42 and product is 178. Find the numbers (6 marks)

Y) Divide 28 in 4 parts which are in A.P. such that the ratio of product of 2<sup>nd</sup> and 3<sup>rd</sup> term to the 1<sup>st</sup> and 4<sup>th</sup> term is 6:5. Find the numbers. (6 marks)

Q3. A) Sum of n terms of A.P. series 49, 44, 39..... Is 30 . Find n, S<sub>10</sub> and t<sub>20</sub>. (6 marks)

B) Using formula method, solve the quadratic equation:  $\frac{1}{x} - \frac{1}{x-7} = \frac{11}{30}$  (6 marks)

OR

X) i) Insert 6 numbers between 3 and 24 such that resulting series is in A.P. (3 marks)

ii) Insert 2 numbers between 3 and 81 such that resulting series is in G.P. (3 marks)

Y) Check whether the solution exist or not. If yes, find the solution to it using elimination method:  $2x + 3y = 11$  and  $2x - 4y = -24$ . (6 marks)

Q4. A) Find the amount of annuity of Rs. 40,000 payable at the end of each year for 4 years at 12% p.a. i) Compounded monthly ii) Compounded annually (6 marks)

B) The simple interest on a certain sum for 1.5 years at 12% p.a. is Rs. 60 less than the simple interest on the same sum for 3 years at 10% p.a. find the sum (6 marks)

OR

X) A sum of money amount to 11910.16 in 1 ½ years at 12% p.a. the interest being compounded semi - annually and annually. Find the difference between the sum (6 marks)

Y) What will the compounded interest on Rs. 1000 per 20 years at rate 5% p.a.? how much would the simple interest on the same principle for the same period? And what is the difference between simple interest amount and compound interest amount? (6 marks)

- Q. A) For the following data draw the histogram and frequency polygon: (6 marks)

Class - Interval	Frequency
20 – 30	5
30 – 40	10
40 – 50	15
50 – 60	17
60 – 70	20
70 – 80	5

- B) In G.P. sum of 4 terms is 60 and sum of 1<sup>st</sup> and last term is 36 (6 marks)  
Find the 4 numbers.

OR

- X) Whether the solution exist or not for the following system: (3 X 2 marks = 6 marks)

- i)  $x + 2y = 4$  and  $2x + 4y = 12$
- ii)  $3x - 5y = 20$  and  $6x - 10y = 40$
- iii)  $x - 3y = 7$  and  $3x - 3y = 15$

- Y) For the following data draw “ less than “ and “ more than “ Ogive curve: (6 marks)

Wages (in Rs.)	No. workers
40 – 45	10
45 – 50	13
50 – 55	18
55 – 60	20
60 – 65	11
65 – 70	8