

Vidhya Vikas Mandal's

Shree Damodar College of Commerce & Economics Margao Goa

F.Y.BBA(FS), Semester I, October 2018 Semester End Assessment

QUANTITATIVE SKILLS

Duration: 2 Hours

Total Marks: 60

INSTRUCTIONS:

- I. Figures to the right indicate maximum marks
- II. Start each answer on a fresh page.
- III. All questions are compulsory
- IV. Non scientific, non programmable calculator allowed.

1. Attempt the following:

[6x2=12 Marks]

- a. A company administers an aptitude test to 100 applicants for a job with the company. The following are the time taken to complete a simple task for each applicant, measured to the nearest second. Draw a frequency distribution table using classes 40-49, 50-59 etc. Also find the range of the data

44, 52, 92, 68, 69, 41, 63, 60, 47, 47, 92, 40, 58, 40, 58, 55, 89, 67, 86, 70, 72, 93, 74, 48, 40, 74, 87, 68, 55, 78, 45, 54, 42, 76, 76, 66, 41, 97, 54, 58, 85, 52, 43, 71, 70, 64, 57, 57, 48, 96, 61, 64, 56, 99, 42, 47, 68, 47, 85, 54, 66, 65, 46, 51, 52, 58, 59, 53, 45, 62, 46, 44, 52, 72, 46, 46, 81, 61, 84, 60, 59, 51, 45, 52, 73, 52, 51, 52, 53, 57, 67, 66, 56, 56, 59, 54, 82, 49, 49, 58

- b. Draw a frequency polygon for the following data:

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. Of students	3	8	12	18	10	4

OR

- p. Draw a less than ogive curve for the following data

Wages (inRs)	70-80	80-90	90-100	100-110	110-120	120-130	130-140
No. Of workers	85	109	126	134	115	83	68

q. Draw histogram for the following distribution.

Height in cms	150-155	155-160	160-165	165-170	170-175	175-180
No. Of persons	7	15	37	29	10	2

2. Attempt the following:

[4x3=12Marks]

- If for an AP  $a=1/4$ ,  $d=3/2$ , find  $S_{10}$ .
- Find three numbers in GP such that their sum is 38 and product is 1728.
- If 20 men can do a piece of work in 45 days, how many men will be required to do it in 25 days?

OR

- For an AP  $T_3 = -40$  and  $T_{13} = 0$ . Find the AP
- For the GP  $4, -4, 4, -4, \dots$  find  $T_8$  and  $S_{15}$ .
- Express the following as ratio:
  - 50 kg and 800gm
  - 80 paise and 3 Rs
  - 70ml and 2 litres
  - 45cm and 7m

3. Attempt the following:

[4x3=12 Marks]

- Solve the following simultaneous linear equation by substitution method  
 $2x+5y=9$  and  $3x-y=5$
- The cost of 2 kg apples and 1 kg grapes on a particular day was found to be Rs 160. After a month the cost of 4 kg apples and 2 kg grapes was Rs 300. Find the cost of apples and grapes.
- Calculate the simple interest on Rs 20950 for 7 months at the rate of 11.65% pa

OR

- Solve the following quadratic equation  
 $6x^2 - x - 2 = 0$
- Find two consecutive odd positive integers, sum of whose squares is Rs 290.
- Find the compound interest on Rs 15000 at 7% pa for 4 years if the interest is calculated half yearly.

4. Attempt the following:

[4x3=12 Marks]

- In a GP the second and the fifth terms are 24 and 81 respectively. Find the sequence.
- Express the following fractions into percentage
  - $6/25$
  - $29/16$
  - $7/10$
  - $51/9$
- A TV dealer sells a TV set for Rs 10000. If the print price of TV is Rs 12568, calculate the rate of trade discount.

OR

- p. Find the sum of all natural numbers from 100 to 300 which are exactly divisible by 5.
- q. Compute the amount on Rs. 600 after 5 years at 3.5% p.a simple interest
- r. Convert the decimal fraction into percentage
- i. 0.525      ii. 0.004      iii. 3,8   iv. 7.59

**5. Attempt the following:**

**[4x3=12 Marks]**

- a. Find the sum  $3+6+12+\dots$  upto 12 terms.
- b. For the future value of an ordinary annuity if the payment of Rs 3000 made at the end of every quarter for 10 years at the rate of 6% per year compounded annually.
- c. Solve the following simultaneous linear equation by elimination method  
 $3x+4y=10$  and  $2x-2y=2$

**OR**

- p. Find the number of terms of the GP 5, -10, 20, ..., 960
- q. Find the present value of an ordinary annuity of Rs 900 payable at the end of 6 months for 6 years if the money worth 8% is compounded semi annually.
- r. Find the nature of roots of the quadratic equation  $2x^2-5x+3=0$
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