

**Vidya Vikas Mandal's**  
**Shree Damodar College of Commerce & Economics, Margao-Goa**  
**FY BBA(FS), Semester-I, Semester End Assessment November 2022**  
**BFS GEC 1- Quantitative Skills**

Max Marks: 60

Duration: 2hrs

Instructions:

- 1) Start each question on fresh page.
- 2) Figures to the right indicate maximum marks.
- 3) Non-scientific, non-programmable calculators are allowed

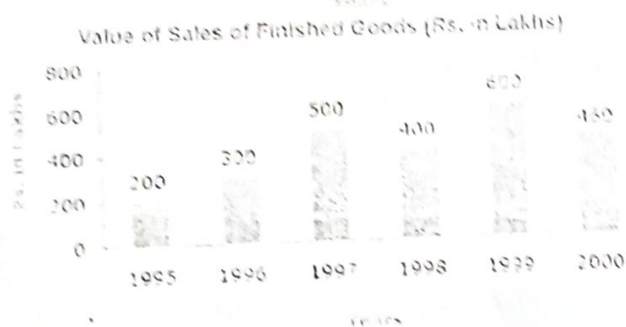
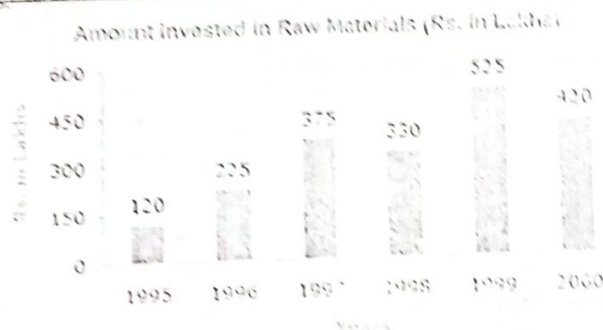
Q1 Answer the following

[2x6=12Marks]

- A. Prepare a cumulative frequency distribution table for the following distribution. Also state the number of individuals with income less than 15000 and more than 20000

Monthly income in Rs	1000-5000	5000-10000	10000-15000	15000-20000	20000-25000
No. of individuals	45	19	16	02	05

B.



Out of the two bar graphs provided below, one shows the amounts (in Lakh Rs.) invested by a Company in purchasing raw materials over the years and the other shows the values (in Lakh Rs.) of finished goods sold by the Company over the years.

Analyze the graphs and answer the questions given below

- i. What was the difference between the average amount invested in Raw materials during the given period and the

- average value of sales of finished goods during this period?
- ii. The maximum difference between the amount invested in Raw materials and value of sales of finished goods was during the year?

OR

**Q1 Answer the following**

[2x6=12Marks]

- X. Draw a less than ogive for the data given below related to income of various women entrepreneurs in last quarter. Analyze the graph drawn in your own words.

Income in thousand Rs	No. of women Entrepreneurs
0-15	2
15-30	4
30-45	5
45-60	17
60-75	39
75-90	54
90-105	70

Y. Write short notes on:

- i. Primary survey and secondary survey using suitable examples.
- ii. One dimensional diagram and two-dimensional diagrams
- iii. Parts of table

**Q2. Answer the following**

[3x4=12Marks]

- A. State whether the following lines are intersecting, parallel or coincident. Justify your answer.  
 $2x+3y=5$  and  $6x-2y+4=0$
- B. Solve the following simultaneous equations by substitution method  
 $4x+5y=7$  and  $3x-y+9=0$
- C. South Goa district library has a fixed charge for the first 10 days and an additional charge for each day thereafter. Tricia paid Rs.50 for a book kept for fourteen days, while Susy paid Rs.83 for the book she kept for seventeen days. Find the fixed charge and the charge for each extra day.

OR

Q2 Answer the following

[2x6=12Marks]

X. Find the roots of the following equations by factorization method:

i.  $9x^2 - 12x - 5 = 0$

ii.  $15x^2 + 52x + 45 = 0$

Y. A bakery produces a certain number of breads in a day. It was observed on a particular day that the cost of production of each bread (in rupees) was 3 more than twice the number of breads produced on that day. If the total cost of production on that day was Rs.90, find the number of breads made and the cost of production of each bread.

Q3 Answer the following

[2x6=12Marks]

A. TATA tea Estate began production in a new plant in Munnar last year, it produced 8000 cartons of tea, it is projected that production will increase by 50 cartons each year.

- Determine the production in the 5<sup>th</sup> and 9<sup>th</sup> year
- Determine whether the production will ever reach 32500 cartons of tea.

B. If the 5<sup>th</sup> term and 12<sup>th</sup> term of an Arithmetic Progression are 30 and 65 respectively, find the sum of its 26 terms.

OR

Q3 Answer the following

[2x6=12Marks]

X. The US government decides on a tax-rebate program to stimulate the economy. Suppose Emily receives \$900 and she spends 80% of this. Those people who receive what Emily spent also spend 80% of what they get and those receiving this spend, spend 80% and so on. Calculate how much the 10<sup>th</sup> person spends. Also find total amount spent, if this process continues without end.

Y. Find the general expression of sum of the sequence  $\frac{6}{10}, \frac{6}{100}, \frac{6}{1000}, \dots$  to  $n$  terms. Hence find the sum when  $n=10$

Q4 Answer the following

[3x4=12Marks]

A. Salaries of Ravi and Sumit are in the ratio 2:3. If the salary of each is increased by Rs4000, the new ratio becomes 40:57. Determine what is Sumit's salary.

B. Divide 356 in the ratio 2:3 and 4:5

C. Find  $x$  if  $0.75:x :: 5:8$ . Also find fourth proportional to 5,8,15

OR



Q4 Answer the following

[12Marks]

- X. Sahil set up a dance academy called Sahil's Art Academy. Along with dance he kept of introducing other art forms all under one roof and hence instructors for each course were appointed. He paid a rent of Rs 10000 per month. The fees were: for the dance classes Rs 1200 per month, the art and craft classes Rs 800 per month, gymnastic Rs 1500 per month. He offered a discount of 10% to all those who enrolled themselves in all courses. In addition to his miscellaneous expenditure of Rs2000 per month, he paid each instructor Rs 5000 a month. If total 10 people enrolled in dance class, 12 in Art and craft and 5 in gymnastic course and in addition 5 of them joined all three courses, Calculate his profit or loss %.

Q5 Answer the following

[3x4=12Marks]

- A. A cooperative society offers fixed deposits for 5 years under the following schemes:
- At 9%, if the interest is calculated half yearly.
  - At 11%, if the interest is calculated quarterly.
- State which scheme is more beneficial to the public.
- B. On selling a T.V. at 5% gain and a fridge at 10% gain, Reliance digital gains Rs 2000. But if it sells the T.V. at 10% gain and fridge at 5% loss, it gains Rs1500 on the transaction. Find the actual prices of T.V and fridge.
- C. Aachal saved Rs 4000 for the first month of her job and Rs4200 in the next. Given that her savings are in AP,
- Determine the amount she saved in the 12<sup>th</sup> month and in 16<sup>th</sup> month.
  - Ratio of savings made in the 12<sup>th</sup> month and 16<sup>th</sup> month

OR

Q5 Answer the following

[3x4=12Marks]

- X. If the cost of bananas is increased by Re 1 per dozen, one can get 2 dozen less for Rs 840. Find the original cost of one dozen of banana.
- Y.
- Insert three Arithmetic means between 8 and 16.
  - Insert three Geometric means between 6 and 96
- Z. Find the time required for sum of money to amount to five times itself at 16% simple interest p.a.