(b) Find the T-scores corresponding to the test scores X for the following frequency distribution:

x	1	2	3	4	5	6	7
y	5	10	20	5	4	4	2

13.(a) Describe the concept of scaling of judgment.

(or)

(b) Explain the Stanine scale for grouped data.

14.(a) Describe the index of reliability.

(or)

(b) Briefly write the procedure for split – half method.

15.(a) Explain Validity and test length.

(or)

(b) State the types of validity and explain.

SECTION - C (30 Marks)
Answer any THREE Questions
ALL Questions Carry EQUAL Marks   (3 x 10 = 30)

16. On the basis of the following information compute : (i) $r_{23.1}$ (ii) $r_{13.2}$ (iii) $r_{12.3}$, If $r_{12} = 0.70$, $r_{13} = 0.61$ and $r_{23} = 0.40$.

17. Explain the following terms (i) σ – scores and (ii) standard scores.

18. Briefly explain the concept of scaling of ranking in terms of Normal probability curve.

19. Explain the effect of test length on the reliability of the test.

20. Distinguish between reliability and validity.

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – STATISTICS

TIME SERIES AND INDEX NUMBERS

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1. The oscillatory movements in a time series with period of oscillation more than one year are termed as ....
   (i)irregular component   (ii)seasonal variations
   (iii)secular trend   (iv) Cyclic variation

2. The most important factors causing seasonal variations are
   (i)growth in population   (ii)technological improvements
   (iii)weather and social customs   (iv) change in fashions

3. A good index number is one that satisfies
   (i)unit test   (ii)time reversal test
   (iii)factor reversal test and circular test   (iv) All of the above

4. Laspeyre's index is based on
   (i)base year quantities   (ii)current year quantities
   (iii)both of them   (iv) average of current and base year

5. National income committee was set up in ....
   (i)1940   (ii)1950   (iii)1949   (iv) 1947

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6. (a) Define time series.

OR

   (b) Mention the various types of trends.

7. (a)Explain how to construct the index of seasonal variation.

OR

   (b) Explain briefly about the steps involved to construct ratio to moving average.

8. (a) List out the tests for constructing index numbers.

OR

   (b) Define index number.

9. (a) What is chain index numbers?

OR

   (b)What is value index numbers?

10. (a) What you mean by national income?

OR

    (b) What is national income formula?

Cont...