



Shiksha Mandal, Wardha's

**G. S. College of Commerce & Economics, Nagpur**

An Autonomous Institution

(Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

First Semester Bachelor of Commerce (Computer Application) Examination  
(CBCS)**MATHEMATICS**

(BCCASFC 1.0)

Time: 3 Hours

Maximum Marks: 80

Note: A) All questions are compulsory.

B) Draw well labeled diagram wherever necessary.

Q.1. Solve the following question.

10

A) Convert following base to Octal Number:

i)  $(A72E)_{16}$ ii)  $(11101)_2$ iii)  $(387)_{10}$ iv)  $(110010110)_2$ v)  $(8735)_{10}$ 

OR

B) Convert following number into decimal number according to their base.

i)  $(2F9A)_{16}$ ii)  $(8AD)_{16}$ iii)  $(10111101)_2$ iv)  $(7325)_8$ v)  $(4276)_8$ 

Q.2 Solve the following question.

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A) Find the compound interest on Rs. 19,289 at 14% per annum, if the interest is calculated.

a) Annually

b) Half yearly

c) Monthly

OR

B) Find the mode of the following frequency distribution, -

Size (x)	1	2	3	4	5	6	7	8	9	10	11	12
Frequency (f)	3	8	15	23	35	40	32	28	20	45	14	6

- Q.3. Solve the following question. 10
- A) What is Ratio? Explain different types of Ratio and Proportion with example
- OR
- B) From a deck of 52 Cards, we draw 2 Cards one by one without replacement. Find the probability that both cards are Aces.
- Q. 4. Solve the following question. 10
- A) Find the number of arrangement of the letters of the word 'STATISTICS' if
- a) The vowels appear together, and
- b) Order of the vowels remains unchanged
- OR
- B) From 10 books, in how many ways, can a selection of 6 books be made so that two specified books are always
- a) Included and b) Excluded
- Q.5 Answer the following questions. (Solve any two) 08
- A) What is Number System? Explain Binary Number System in detail.
- B) Write steps to convert Hexadecimal Number to Decimal Number.
- C) Explain Decimal Number System and Octal Number System in detail.
- Q.6 Answer the following questions. (Solve any two) 08
- A) Define the term Dispersion. Explain any two measures of Dispersion with their merits and demerits.
- B) What are the measures of Central Tendency? Explain any one of the measures in detail.
- C) Explain Mean with advantages and disadvantages.
- Q.7 Answer the following questions. (Solve any two) 08
- A) What is Probability? Explain with example.
- B) Explain Proportion and Variations with suitable example.
- C) What is Percentage? State the uses of percentage.
- Q.8 Answer the following questions. (Solve any two) 08
- A) Explain Circular Motion with example.
- B) Explain the term Data Interpretation. Write different methods to Interpret Data.
- C) What is Combination? Explain fundamental rules of counting.
- Q.9 Answer the following questions in about 3-4 sentences each: 08
- A) Explain BCD code with example.
- B) What is Geometric Mean? Explain with example.
- C) How to convert decimal fraction into percentage? Explain with example.
- D) What is Partnership? Explain with example.

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