



Shiksha Mandal, Wardha's  
**G. S. College of Commerce & Economics, Nagpur**

An Autonomous Institution

(Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

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

**MATHEMATICS**

(BCCASFC 1.0)

Time: 3 Hours

Maximum Marks: 80

Note: All Questions are compulsory.

Q.1 A) Do as directed:

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- i)  $(592)_{10} = (?)_2$                       ii)  $(6235)_8 = (?)_{16}$   
iii)  $(624)_8 = (?)_{10}$                       iv)  $(45A)_{16} = (?)_{10}$   
v)  $(1101)_2 = (?)_{10}$

OR

B) Do as directed:

- i)  $(215.43)_8 = (?)_{10}$                       ii)  $(4A9.2B)_{16} = (?)_{10}$   
iii)  $(10110001)_2 = (?)_{10}$                       iv)  $(456)_{10} = (?)_{16}$   
v)  $(308)_{10} = (?)_2$

Q.2 A) Calculate Quartile Deviation and its Co-efficient.

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Marks (Out of 100)	30	40	45	47	49	50	53	54	56	60
No. of Students	10	21	35	57	64	72	61	45	25	1

OR

B) Calculate geometric mean from the following annual income of eight families.

Income (₹) : 355, 480, 1262, 1892, 3550, 7941, 1729, 805.

Q.3 A) A die is tossed and the number of points appearing on the uppermost face is observed.  
What is the probability of obtaining?

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- a. an even number  
b. an odd number  
c. less than 3  
d. a 'Six'  
e. more than 4

OR

B) Express the given percentage into decimal fraction.

- a. 12.75%  
b. 6.25%  
c. 0.975%  
d. 0.003%  
e. 0.025%

Q.4 A) 'A' can do a piece of work in 60 days which 'B' can do in 40 days. Both started the work, but 'A' left 10 days before the completion of the work. The work has finished in how many days. 10

OR

B) In how many ways can the letter of the word 'BUSINESS' be arranged in the following cases?

(a) There is no restriction (b) The vowels always occupy the odd places.

Q.5 Answer the following questions in about 75-100 words (Any Two): 08

A) Explain any two number systems.

B) Explain EBCDIC with example.

C) Explain BCD code with example.

Q.6 Answer the following questions in about 75-100 words (Any Two): 08

A) Explain Mean with advantages and disadvantages.

B) Explain Cumulative Frequency with suitable example.

C) Explain Range with its advantages.

Q.7 Answer the following questions in about 75-100 words (Any Two): 08

A) Explain the term Profit and Loss with suitable example.

B) What is Percentage? How to convert a simple fraction into percentage?

C) Explain any two types of Proportion with example.

Q.8 Answer the following questions in about 75-100 words (Any Two): 08

A) Explain Circular Motion with example.

B) Explain the term Data Interpretation.

C) Define Permutation with example.

Q.9 Answer the following questions in about 3-4 sentences. 08

A) What are the types of Number System?

B) What are the measures of Central Tendency?

C) What is Partnership?

D) Define Combination.

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