

**HIRALAL BHAKAT COLLEGE**  
**Nalhati, Birbhum, West Bengal, Pin-731220**

Continuous Assessment: September, 2019

Session: 2019 - 2022

Semester: I (B. Sc., GENERAL)

Component: 1

Subject: Mathematics

Course: CC-1A

Marks: 5

Max Time: 10 Minutes

Name of the student:.....

College Roll No.....

Signature of the Examiner ..... Marks Obtained .....

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**Answer all the questions. Each question carries one mark.**

1. The function  $f(x) = |x|$  has .....(maximum/minimum) value at the origin.
2. The value of the limit  $\lim_{x \rightarrow 0} \frac{\sin x}{x}$  equals to  
(i) 0      (b) 1      (c) 2      (d)  $e^{1/3}$
3. At  $x = 1$ , the function  $f'(x) = (x - 1)^2(x - 2)^3$  has  
(i) maximum value  
(ii) minimum value  
(iii) neither maximum nor minimum  
(iv) none of the above
4. At  $x = 1/2$ , the function  $f(x) = x^2 - x$  has  
(i) maximum value  
(ii) minimum value  
(iii) neither maximum nor minimum  
(iv) none of the above
5. The value of  $a$ , for which the limit  $\lim_{x \rightarrow 0} \frac{ae^x - 2 + x}{x^2}$  has finite limit, is  
(i) 1      (ii) 4      (iii) 2      (iv) -1



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SESSION : 2019 - 2022  
SEMESTER: I (B. Sc., GENERAL)  
COMPONENT : 1  
CONTINUOUS ASSESSMENT : SEPTEMBER, 2019  
SUBJECT : Computer Science

FULL MARKS: 05

Marks Obtained : .....

NAME OF THE STUDENT : .....

COLLEGE ROLL NO. : .....

SIGNATURE OF THE EXAMINER:

1) Answer the following Questions ( any five ) :

1 × 5 = 5

- 1.a) The value of base in a decimal number system is \_\_\_\_\_
- 1.b) Convert  $(52)_{16}$  into its decimal equivalent.
- 1.c) Binary Addition using 2s complement - **0111 and 0011.**
- 1.d) What is the output of 2-input OR gate
- 1.e) find out 2s complement-  $(1111101010)_2$



# HIRALAL BHAKAT COLLEGE

NALHATI, BIRBHUM, WEST BENGAL, PIN 731220

2019-2020 SESSION

SEMESTER 1 (B.SCGENERAL)

COMPONENT 1

CONTINUOUS ASSESSMENT (September 2019)

SUBJECT: PHYSICS

COURSE: CC1A/GE-1

FULL MARKS: 5

NAME OF THE STUDENT: .....

COLLEGE ROLL NO.: .....

MARKS OBTAINED:

Answer the following questions (5x1=5):

Internal

1.  $\vec{A} = 3\hat{i} + 2\hat{j} - 6\hat{k}$  এবং  $\vec{B} = 4\hat{i} - 3\hat{j} + \hat{k}$  ভেক্টর দুটির  
সরলরেখার কোনেয় মান কত?
2. 'x' এর কোন মানের জন্য ভেক্টরদ্বয়  $\vec{A} = \hat{i} + 2\hat{j} + \hat{k}$   
এবং  $\vec{B} = 3\hat{i} - 2\hat{j} - 2\hat{k}$  পরস্পরকে অধিলম্বিত হবে?
3.  $\vec{A} = 3\hat{i} + 4\hat{j} + \hat{k}$  ভেক্টরটির অধিলম্বিত  
একক ভেক্টর নির্ণয় করুন।
4. দেখান যে,  $\vec{A} = \hat{i} - 2\hat{j} + \hat{k}$  এবং  $\vec{B} = -2\hat{i} + 4\hat{j} - 2\hat{k}$   
ভেক্টরদ্বয় পরস্পরকে অধিলম্বিত।
5.  $|\vec{A}| = 5$ ,  $|\vec{B}| = 6$  হলে  $\vec{A} \times \vec{B}$  এর মান কত?  
[সমান,  $\theta = 30^\circ$ ]