Tribhuvan University

# Faculty of Humanities & Social Sciences OFFICE OF THE DEAN

**2019**

**Bachelor in Computer Applications Full Marks: 60**

**Course Title: Mathematics I Pass Marks: 24**

**Code No: CAMT 104 Time: 3 hours**

**Semester: 1st**

# Centre: Symbol No:

## Candidates are required to answer the questions in their own words as far as possible.

**Group A**

## Attempt all the questions. [101 = 10]

1. Circle (O) the correct answer.
   1. If A = [-1,3) and B = [2,5], then A-B is equal to a) [-1,2) b) [-1,3)

c) (-1,2) d) [-1,3]

* 1. If

*f* (*x*) 

and

*g*(*x*)  *x* 1 then, what is the value of

*g**f* (*x*) ?

a)

*x*

*x* 1

* + 1. *x*  1 4

b) +1

* + 1. *x*  2

*x*

* 1. What is the reciprocal of the complex number (2,1)? a) (1/5, 1/5) b) (2/5, -1/5)

c) (-2/5, 1/5) d) (-2, -1)

* 1. What type of function *y*  *f* (*x*)  *ax*2  *bx*  *c* is?

a) Constant function b) Linear function

c) Identity function d) Quadratic function

* 1. Geometrical meaning of scalar triple product of three vectors

  

*a*, *b*, *c*

is the

1. Volume of parallelepiped formed by

  

*a*, *b*, *c* as adjacent sides



1. | *a* |× Projection of



*b* on

 

*a* and *c*



1. | *b* | × Projection of

 

*b* on *a*

  

d) | *a* | | *b* | | *c* |

* 1. If a, b, c is in H.P then, what is the value of b?

*a*  *c*

a) 2

1. 2*ac a*  *c*

b)

1. 2

*ac*

*ac a*  *c*

* 1. Which of the following is the rank of the Matrix 2

2





a) 0 b) 1

c) 2 d) 3

4 ?



4

* 1. In how many ways 6 persons can seat in a round table? a) 720 b) 360

c) 120 d) 60

* 1. Let

*A*  1



0

0 , and a map *T* : *R*2



1

 *R*2 defined by T(x)=A(x) then what is the image

of *u*  1 under T?

 

2

 

1

a) 2

1

1

b)

   

0

c) 2

2

d) 1

   

1

* 1. If

*r*  1  cos

then, this is the equation of..

a) Parabola b) Hyperbola

c) Ellipse d) Circle