NUST ENTRANCE TEST
SAMPLE PAPER FOR BACHELOR CANDIDATES OF
ENGINEERING / COMPUTER SCIENCE

ENGLISH

Directions for Q 1 - 2

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath in sentence are five lettered words or sets of words. Choose the word or set of words that best fits the meaning of the sentence as a whole.

Q-1   The Selection committee for the exhibit was amazed to see such fine work done by a mere _____.
    a.   Connoisseur   b.   Artist   c.   Amateur
    d.   Entrepreneur   e.   Exhibitionist

Q-2   Unlike W.E.B Dubois, who was _____ of the vocational emphasis in black education, Booker T. Washington favored _____ the limited funds available for educating blacks to programs that prepared people for practical jobs.
    a.   Critical ………. restricting
    b.   Aware ……….. confining
    c.   Suspicious …… denying
    d.   Protective ……. allotting
    e.   Appreciative … allocating

Q-3   Illicit Means:
    a.   draw out   b.   barely perceivable
    c.   not necessary   d.   not licensed

Q-4   He was the first explorer to go around the world. 'Explorer' means:
    a.   A person who travels around the world.
    b.   A person who discovers new places.
    c.   A person who looks for new business.
    d.   A person who discovers old places.

ANALOGY
Direction

Each question below consists of a related pairs of words or phrases, followed by five lettered pairs of words or phrases, Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

Q-5   FISH   :   TROUT
    a. Ocean   :   wave
    b. Mammal   :   whale
    c. Bird   :   aviary
    d. Antenna   :   insect
    e. Stag   :   doe

ANTONYM
Directions:

In each of the following antonym questions, a word printed in capital letters precedes five lettered words or phrases. From these five lettered words or phrases, pick the one most nearly opposite in meaning to the capitalized word.

Because some of the questions require you to distinguish fine shades of meaning, be sure to consider all the choices before deciding which one is best.

Q-6   GRANDIOSE

    a.   docile   b.   unlikely to occur
    c.   simple and unimposing   d.   light in weight
    e.   uncommunicative

Read the brief text and then tick the best answer.

Q-7   Kilims are one of the unknown arts of Turkey. These smooth floor coverings, are fine examples of folk art. The weaver works on making colorful designs, or patterns, out of pieces of wool. Sitting at a small, simple loom outside her house, she makes something both useful and beautiful. The product of her work will both warm and brighten her home. It would also interest the art collector of a faraway country.
    A **kilim** is a:
    a. person   b. place   c. thing

MATHEMATICS

MEGA LECTURE

Select the most appropriate choice:

Q-8   Which of the following is incorrect?
   a.   Volume of a rectangular solid = length x width x length
   b.   Volume of a cube = (length of any face of the cube)^3
   c.   Volume of a right circular cylinder = π (radius)^2. height
   d.   Volume of a right prism = (Area of base). Height
   e.   All are correct

Q-9   Find the solution set of   x + y = 5,   2 x - y = 7
   a. $\{(1,4)\}$ b. $\{(2,3)\}$ c. $\{(4,1)\}$ d. $\{(1,4)\}$

Q-10   A square matrix A is symmetric if A = ?
   a. A^t b. A   c. $-A$ d. A^{-1}

Q-11   How many numbers consisting of two digits can be formed from 2, 3 5,7. Each integer is to be used only once.
   a. 10   b. 12   c. 14   d. 16

Q-12   Find the angle of elevation of the sun when a 6m high pole makes shadow of length $2\sqrt{3}$m on the horizontal plane.
   a. 30^0 b. 45^0 c. 60^0 d. 90^0

Q-13   For any positive rational number k, and any real number c, which of the following is incorrect?

   a. $\lim\limits_{x\to\infty} c = c$ b. $\lim\limits_{x\to-\infty} c = c$ c. $\lim\limits_{x\to\infty} \dfrac{c}{x^k} = 0$

   d. $\lim\limits_{x\to-\infty} \dfrac{c}{x^k} = 0$ e.   All are correct

Q-14 $\int$ ln x dx = ?

   a. $\ln x - x + C$ b. $\ln x + C$ c. $x. \ln\left(\dfrac{x}{e}\right) + C$ (*)   d. $x \ln x + C$

   e. None of these

PHYSICS

Q-15   When a force is applied to a body, several effects are possible. Which of the following effects could NOT occur?
   a. The body speeds up.   b. The body rotates.   c. The mass of the body decreases.
   d. The body changes direction.   e. The body remains as it was.

Q-16   What are the main energy changes in a hydroelectric power station?
   a. electrical $\longrightarrow$ kinetic $\longrightarrow$ heat
   b. potential $\longrightarrow$ kinetic $\longrightarrow$ electrical
   c. kinetic $\longrightarrow$ light $\longrightarrow$ electrical
   d. heat $\longrightarrow$ electrical $\longrightarrow$ kinetic
   e. heat $\longrightarrow$ kinetic $\longrightarrow$ electrical

Q-17   Isobars are an important feature shown on weather maps. They join up points which have equal values of
   a. pressure   b. rain fall   c. temperature   d. sun shine   e. wind speed

Q-18   An unlit match is held near (not touching) to an extremely hot bunsen flame. The match does NOT get hot enough to light because
   a. the flame is not hot enough   b. air is a bad conductor of heat
   c. the match head reflects radiation   d. the flame does not radiate any heat sideways.

Q-19   What would a drummer do to make the sound of a drum give a note of lower pitch?
   a. hit the drum skin with a larger force   b. hit the drum skin with a smaller force
   c. hit the drum skin nearer the edge   d. loosen the drum skin

Engg/IT-Page 2 of 3

CHEMISTRY

Q-20   Pepsin (the enzyme in stomach) has an optimum pH of:
a. 1   b. 1.2   c. 1.4   d. 1.6

Q-21   Which of the following is not an organic compound:
a. sugar   b. alcohol   c. plastics   d. sea water

Q-22   Which of the following saturated hydrocarbon is gas at room temperature?
a. CH_4 b. C_2H_6 c. C_3H_8 d. All of these

Q-23   Which of the following pairs have same atomic radius
a. Cr and Co   b. Fe and Co   c. Fe and Mnn   d. None of these

Q-24   Surfactants used in detergents are:
a. anionic   b. cationic   c. nonionic   d. all of these

COMPUTER SCIENCE (For BE Computer Software candidates only)

Q-25   Internet is being used as a tool to let the people:
a.   Share computer CRTs
b.   Share computer resources
c.   Share output devices
d.   Share input devices

Q-26   Translation of a file into a coded format that occupies less space than the original file is called:
a.   file decompression
b.   file expansion
c.   file compression
d.   file communication

Q-27   Your computer can get a virus by:
a.   executing Thunderbyte program from the hard disk
b.   executing Norton Antivirus program from the hard disk
c.   using floppy disks of your friends
d.   running an executable file after checking it through Mcafee

Q-28   The reason for compressing a file is:
a.   to save space on the disk
b.   to quickly install the web browser
c.   to quickly run the search engine
d.   none of these

Q-29   _____ is a single cell in the work area of spreadsheet in which a user is currently positioned:
a.   current cell
b.   active cell
c.   both a & b
d.   none of these

Q-30   The ith (i ranges from 1 to the total number of elements in the array) element of an array **c** is referred to as:
a.   c[i]   b.   c(i)
c.   c[i-1]   d.   c[i+1]

                        OR

What will be the result after the execution of the following code

```
Sub ShowDate ( )
MsgBox Date ( )
End Sub
```

a.   Generate Error   *b.   Display current date
c.   Display current time and date   d.   Display date which is input by user