



# VIRTUAL UNIVERSITY OF PAKISTAN

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## Entry Test Sample for BS Bioinformatics Program

Total Question: 30

Total Marks: 30

Time Allowed: 30 min

Note: Please click the correct answer from the given choices

- 1- Human Genome Project was completed in
  - a- 2001
  - b- 2003
  - c- 1998
  - d- 1995
- 2- Step wise method for solving problems in computer science is called
  - a- Procedure
  - b- Algorithm
  - c- Sequential Design
  - d- Flowchart
- 3- Messenger RNA is a \_\_\_\_\_ structure.
  - a- Double stranded
  - b- Helical
  - c- Single stranded
  - d- Ladder like
- 4- PHP is a scripting language. The recursive acronym of PHP is \_\_\_\_\_.
  - a- Hyper Pre-processor
  - b- Hypertext Preprocessor
  - c- Hyperlink Pre-processor
  - d- None
- 5- The substance which increases the rate of chemical reaction is
  - a- Metal
  - b- Alloy
  - c- Catalyst
  - d- Enzymes
- 6- pH is an abbreviation for?
  - a- Power of Hydrogen
  - b- Population of Hydrogen
  - c- Possibility of Hydrogen
  - d- Position of Hydrogen
- 7- What is the sum of the sequence  $\sum_{k=0}^4 (1+k!)$ 
  - a- 36
  - b- 37
  - c- 38
  - d- 39
- 8-  $3^2 \times 3^3 \times \frac{1}{3^4} = ?$ 
  - a- 1
  - b- 3
  - c- 9
  - d- 27

- 9- Mononucleosis is caused by
- a- Variola major
  - b- Epstein-Barr virus
  - c- Rhinovirus
  - d- Ebola virus
- 10- Fats and oils are example of?
- a- Proteins
  - b- Vitamins
  - c- Lipids
  - d- Carbohydrates
- 11- The branch of biology which deals with the study of chemical compounds and the chemical processes in the living organisms is called
- a- Chemistry
  - b- Biochemistry
  - c- Molecular biology
  - d- Both a and b
- 12- Which chemical component has the same % in bacterial as well as the mammalian cell?
- a- Water
  - b- Carbohydrate
  - c- Proteins
  - d- Lipids
- 13- Which bond provides stability to complex carbohydrate molecules?
- a- C-H
  - b- C-O
  - c- C-C
  - d- C-N
- 14- Which statement about enzyme is incorrect:
- a- Some of them consist solely of protein with no non-protein part
  - b- They catalyze a chemical reaction without being utilized.
  - c- All enzymes are fibrous Proteins.
  - d- They without their cofactor are called apoenzyme.
- 15- Which one forms the raw material for coenzymes?
- a- Vitamins
  - b- Carbohydrates
  - c- Proteins
  - d- Metals
- 16- Who first observed and thus hypothesized that new cells are formed from the previously existing living cell?
- a- Theodor Schwann and Schleiden
  - b- Rudolph Virchow
  - c- Louis Pasteur
  - d- Both B and C
- 17- Which of the following statement about Homeostasis is incorrect
- a- There is a definite control system that regulates the homeostatic activities
  - b- Homeostatic mechanisms keep the internal environment fixed despite wide changes in the external environment

- c- Because of this, the fluctuations of the internal environment are of extremely narrow range as compared to that of the external environment
- d- All are correct

18- The communication protocol that drives the interest and therefore most Lan`s use is called

- a- Point-to-point
- b- TCP/IP
- c- SNA
- d- None of these

19- The hardware parts are

- a- Firmware components
- b- Physical components
- c- Logical components
- d- All of these

20- Laboratory work used to refer something “performed on computer or computer simulation”

- a- Dry lab
- b- Wet lab
- c- Invitro
- d- Insilico

21- What is the average of first 150 natural numbers?

- a- 70
- b- 70.5
- c- 75
- d- 75.5

22-  $0.003 \times 0.02 = ?$

- a- 0.06
- b- 0.006
- c- 0.0006
- d- 0.00006

23- What is the average of the numbers: 0, 0, 4, 10, 5, and 5?

- a- 2
- b- 3
- c- 4
- d- 5

24- If A completes a particular work in 8 days and B completes the same work in 24 days.

How many days will it take if they work together?

- a- 4
- b- 5
- c- 6
- d- 7

25- What comes next in the sequence: 1, 3, 11, 43, \_\_\_\_?

- a- 161
- b- 171
- c- 181
- d- 191

26- In a class of 40 students 20% are girls. How many boys are there in the class?

- a- 26
- b- 28
- c- 30
- d- 32

27- If  $x = -1$ , then what is the value of the function  $f(x) = x^3 + 4x + 12$

a- 7

b- 9

c- 11

d- 13

28- Mitosis occurs in

a- Diploid cells only

b- Haploid cells only

c- Both diploid and haploid cells

d- Monoploid cells

29- From each pair of centrioles \_\_\_\_\_ sets of microtubules originate

a- 2

b- 3

c- 4

c- 5

30- A chromosome is made of

a- 2 chromatids + 1 centromere + secondary  
constriction

b- 1 chromatids + 1 centromere +  
primary constriction

c- 2 chromatids + 1 centromere + primary  
constriction

d- 2 chromatids + 2 centromere +  
secondary constriction