COVENANT UNIVERSITY NIGERIA

TUTORIAL KIT
OMEGA SEMESTER

PROGRAMME: MECHANICAL ENGINEERING

COURSE: MCE 321

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MCE 321: Computer and Computing

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1.   An attempt to express a possible structure of physical causality is best described as (a) simulation **(b) model** (c) iteration (d) system

2.   Which of the following models could be subject to probabilities (a) heuristic models (b) deterministic models (c) stochastic models (e) simulation models

3.   Which of the following is similar to iconic models (a) $S = ut + \frac{1}{2}at^2$ (b) landing astronaut on a moon **(c) using marks of electric current on a paper to represent the working of muscles** (d) representation of entities by sequences of random numbers

4.   The quality of a random number generator is proportional to its (a) generator (b) algorithm (c) system (d) period

5.   The so-called true random number generators extract random numbers from (a) arbitrary number with a specified number of digits (b) the time from a computer system clock **(c) atmospheric noise** (d) a single seed

6.   To vary the random number seed in BASIC we must use the statement (a) TIMER (b) RANDOMIZE (c) RND (d) RAND

7.   The BASIC statement: X = RND *9 will generate (a) an integer number in the range 0 < X < 9 (b) a number in the range 0 < X < 8 (c) an integer number in the range 0 < X < 8 **(d) a number in the range 0 < X < 9**

8.   The expression $X_{n+1} = 7X_n + 3 \ (\text{modulo } 13)$ is an example of (a) mixed congruential formula (b) mid-product formula (c) quadratic congruential formula (d) mid-square formula

9.   For the expression $X_{n+1} = 7X_n + 3 \ (\text{modulo } 13)$ to start generating the same values of random numbers the value of *n* will be (a) 3 **(b) 13** (c) 7 (d) 8

10.   Which of the following functions in an artificial neuron has a constant input of 1? (a) Scalar input (b) Scalar weight (c) Net input (d) Scalar bias

11.   Artificial neural networks performs the following tasks except **(a) Elimination** (b) Classification (c) Estimation (d) Discrimination

12.   The neural network workflow includes: I. Collect data II. Create the network III. Configure the network IV. Initialize the weights and biases V. Train the network VI. Validate the network VII. Use the network. (a) I and II only (b) I, II and III only (c) I, IV, V and VII only (d) All of the above.

13.   A biological neuron consist of (a) Genes (b) Microspores **(c) Dendrites** (d) Pores

14.   All of these except one are three different levels at which the neural network toolbox software can be used: (a) The command-line operations (b) The GUIs (c) The customization of the toolbox (d) Regression analysis

15.   The different types of computers are i) personal computers ii) work stations iii) super computers iv) notebook computers v) enterprise systems (a) i, iii and iv only (b) ii and v only (c) i and iv only **(d) All of the above**

16.   A single bus structure is (a) The most complex way of interconnecting various parts of the computer (b) Costly (c) Very flexible for attaching peripheral devices (d) unconventional

17.   Data Communications is _____ to devices external to the message source (a) the storage of digital information (b) the Internal transmission of electric current **(c) the transmission of digital messages** (d) the communication of information

18.   The pathway over which information can be conveyed, defined by a physical connector to the devices is known as (a) transmission system (b) integrated circuitry (c) commutations channel (d) wire transmission

19.   The basic functional units of a computer are all but one of the following (a) Input (b) Output **(c) Register** (d) Memory

20.   The symbol S in the equation $T = \frac{N \times S}{R}$ stands for (a) Clock rate (b) Number of actual machine language instructions needed to complete the execution (c) Average number of basic steps needed to execute one machine instruction (d) Processor time required to execute a program that has been prepared in high-level language.