RAMAGYA SCHOOL, NOIDA
VIII/CYBER/2018-19
OLYMPIAD PRACTICE WORKSHEET

1. How many spokes are there in the wheel of a sports car if any two spokes form an angle of 15°?
   (A) 12   (B) 15   (C) 22   (D) 24

2. Two clocks are set at the same time, one is seen to gain 40 seconds and other to lose 50 seconds in 24 hours. In how much time will they show a difference of 15 minutes?
   (A) 90 days   (B) 10 days   (C) 90 hours   (D) 10 hours.

3. A girl was given two candles by her father for her birthday and was told that one candle would burn for six hours and the other, four hours. After they were both lit and allowed to burn for sometime, the girl noticed that one candle was twice as long as the other. State for how long the candles had been burning together?
   (A) 2 hours   (B) 3 hours   (C) 4 hours   (D) 5 hours.

4. Students of the psychology class in a college were getting ready to challenge and out-wit their new lecturer on her first day of teaching but became dumb-founded when she asked them to find the product of $(x – a)(x – b)(x – c)(x – d).......(x – y)(x – z)$. What do you think is the answer?
   (A) 0   (B) 1   (C) 2   (D) $x^n – (a)(b)(c).......(z)$.

5. In the given figure if PQR is an isosceles triangle and PSR is an equilateral triangle and X = 26° then the value of Y (in degrees) will be
   (A) 17   (B) 27

   (C) 37   (D) 47

6. Two clocks are set at the same time, one is seen to gain 40 seconds and other to lose 50 seconds in 24 hours. In how much time will they show a difference of 15 minutes?
   (A) 90 days   (B) 10 days   (C) 90 hours   (D) 10 hours.

7. In which of the following quadrilaterals, the diagonals must be equal?
   (A) Parallelogram   (B) Trapezium

   (C) Rhombus   (D) Square.

8. Each side of a rhombus is 5 cm and one of the diagonals is 8 cm. Calculate the length of another diagonal and the area of the rhombus.
   (A) 8 cm, 32 cm^2 (B) 6 cm, 24 cm^2
   (C) 4 cm, 16 cm^2 (D) 7 cm, 28 cm^2 .

9. A country has six seaports, E, F, G, H, I and J, where ships only run from:
   E to F, F to E, F to G, G to H, H to F H
   to I, J to E, J to I, J to G, I to H
   Passengers can transfer to different ships at the ports. If port G is closed, which of the following trips is impossible by ship?
   (A) J to E   (B) E to H   (C) H to I   (D) J to I.

10. **Step 1 :** Add 4
    Step 2 : Subtract 1
    Step 3 : If less than 15, jump to step 1 and continue from there; otherwise proceed to step 4
    Step 4 : Add 3
    Step 5 : If greater than 18, subtract 2
    If you start with a value of 1 and then apply the above instructions, what is the end result? (A) 11   (B) 17   (C) 18   (D) 19.

11. The two major types of computer chips are:
a. External memory chip
b. Primary memory chip
c. Microprocessor chip
d. Both b and c

12. The two kinds of main memory are:
a. Primary and secondary
b. Random and sequential
c. ROM and RAM
d. All of above

13. A storage area used to store data to a compensate for the difference in speed at which the different units can handle data is
a. Memory
b. Buffer
c. Accumulator
d. Address

14. CD-ROM is a
a. Semiconductor memory
b. Memory register
c. Magnetic memory
d. None of above

15. A hybrid computer
a. Resembles digital computer
b. Resembles analogue computer
c. Resembles both a digital and analogue computer
d. None of the above

16. Which type of computers uses the 8-bit code called EBCDIC?
a. Minicomputers
b. Microcomputers
c. Mainframe computers
d. Super computer

17. The ALU of a computer responds to the commands coming from
a. Primary memory
b. Control section
c. External memory
d. Cache memory

18. Chief component of first generation computer was
a. Transistors
b. Vacuum Tubes and Valves
c. Integrated Circuits
d. None of above

19. What are the stages in the compilation process?
a. Feasibility study, system design and testing
b. Implementation and documentation
c. Lexical Analysis, syntax analysis, and code generation
d. None of the above

20. Which of the following IC was used in third generation of computers?
a. SSI
b. MSI
c. LSI
d. Both a and b