Ques.1: In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?

1. 810  
2. 1440  
3. m2880  
4. 50400  
5. 5760

Answer: 4

Ques.2: Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

1. 4  
2. 10  
3. 15  
4. 16

Answer: 4

Ques.3: If $3^{x - y} = 27$ and $3^{x + y} = 243$, then $x$ is equal to:

1. 0  
2. 2  
3. 4  
4. 6

Answer: 3

Ques.4: A man has Rs. 480 in the denominations of one-rupee notes, five-rupee notes and ten-rupee notes. The number of notes of each denomination is equal. What is the total number of notes that he has?

1. 45  
2. 60  
3. 75  
4. 90

Answer: 4

Ques.5: The higher the wind speed and the longer the fetch or distance of open water across which the wind blows and waves travel, the _____ waves and the _____ energy they process.

1. larger, more  
2. larger, less  
3. smaller, more
4. smaller, less

**Answer:** 1

**Ques. 6:** What J. B. Dunlop invented?

1. Pneumatic rubber tire
2. Automobile wheel rim
3. Rubber boot
4. Model airplanes

**Answer:** 1

**Ques. 7:** Number of moles of MnO4- required to oxidize one mole of ferrous oxalate completely in acidic medium will be

1. 2 moles
2. 6 moles
3. 4 moles
4. 5 moles

**Answer:** 2

**Ques. 8:** Radiocarbon is produced in the atmosphere as a result of

1. collision between fast neutrons and nitrogen nuclei present in the atmosphere
2. action of ultraviolet light from the sun on atmospheric oxygen
3. action of solar radiations particularly cosmic rays on carbon dioxide present in the atmosphere
4. lightning discharge in atmosphere

**Answer:** 1

**Ques. 9:** Nuclear sizes are expressed in a unit named

1. Fermi
2. angstrom
3. newton
4. tesla

**Answer:** 1

**Ques. 10:** Lux is the SI unit of

1. intensity of illumination
2. luminous efficiency
3. luminous flux
4. luminous intensity

**Answer:** 1
Ques. 11: Point A is at a lower electrical potential than point B. An electron between them on the line joining them will

1. move towards A
2. move towards B
3. move at right angles to the line joining A and B
4. remain at rest

Answer: 2

Ques. 12: The high reactivity of fluorine is due to

1. its high electro negativity
2. small size of fluorine atom
3. availability of d-orbitals
4. strong F – F bond

Answer: 1

Ques. 13: The iron ore magnetite consists of

1. Fe2O3
2. Fe3OH4
3. FeCO3
4. 3H2O

Answer: 1

Ques. 14: The main chemical constituent of clay is

1. silicon oxide
2. aluminium borosilicate
3. zeolites
4. aluminium silicate

Answer: 4

Ques. 15: The main use of salt in the diet is to

1. make the taste of food better
2. produce in small amounts the hydrochloric acid required for the digestion of food
3. ease the process of cooking
4. increase the solubility of food particles in water

Answer: 2

Ques. 16: In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?

1. 30%
2.  70%
3.  100%
4.  250%

Answer: 2

**Ques. 17:** A, B, C subscribes Rs. 50,000 for a business. A subscribes Rs. 4000 more than B and B Rs. 5000 more than C. Out of a total profit of Rs. 35,000, A receives:

1.  8400
2.  11,900
3.  13,600
4.  14,700

Answer: 4

**Ques. 18:** The equation of parabola which passes through the intersection of a straight line $x + y = 0$ and the circle $x^2 + y^2 + 4y = 0$ is:

1.  $y^2 = 4x$
2.  $y^2 = x$
3.  $y^2 = 2x$
4.  none of these

Answer: 3

**Ques. 19:** Sin A. Sin B, Cos A are in GP, Roots of $x^2 + 2 \times \cot B + 1 = 0$ are always:

1.  real
2.  imaginary
3.  greater than 1
4.  equal

Answer: 1

**Ques. 20:** A transmission line has a characteristic impedance of 50 Ω and a resistance of 0.1Ω/m, if the line is distortion less, the attenuation constant (in Np/m) is

1.  500
2.  5
3.  014
4.  002

Answer: 4