Technical & Aptitude ACC Question Paper

Q1. When the bull of a thermometer is covered by a cloth dipped in spirit the thermometer reading

    a) increase
    b) does not change
    c) decreases
    d) decreases and then increases

Q2. Helium is symbolically represented as 42 He. The numbers of neutrons in it is

    a) 6
    b) 4
    c) 2
    d) 8

Q3. Kinetic Energy of wind is used in

    a) sail boat but not in wind mills
    b) wind mills but not in sail boat
    c) Both in sail boat and wind mills
    d) Neither sail boat nor wind mills

Q4. A piece of wood is held under water. The up thrust on it will be

    a) equal to weight of wood piece
    b) more than weight of wood piece
    c) zero
    d) less than weight of wood piece

Q5. If we put a blackened plate in the sun its temperature

a) will continuously increase
b) will continuously decrease
c) will remain constant
d) will increase for some time and become constant

Q6. The wall of a dam is made thicker at bottom since

a) pressure exerted by a liquid increases with its depths
b) pressure exerted is equal to its depth
c) pressure exerted by liquid decreases with its depth
d) pressure exerted does not depend on depth

Q7. During photosynthesis, oxygen is liberated because,

a) It is present in chloroplast
b) It is by product of photosynthesis
c) It is needed by all living things
d) It is necessary for photosynthesis

Q8. The following table gives the densities of some liquids. 100 grams of these liquids was poured into four different beakers of the same size. The space occupied by each liquid in the beaker is shown below. Identify the liquids in each beaker.

a) 1-Vegetable oil, 2-Water, 3-petrol, 4-ethyl alcohol.
b) 1-ethyl alcohol, 2-petrol, 3-water, 4-Vegetable oil.
c) 1- Petrol, 2-ethyl alcohol, 3-Vegetable Oil, 4- Water.
d) 1-Water, 2-Vegetable Oil, 3-ethyl alcohol, 4-petrol.

Q9. A washer man uses a little indigo blue after washing the clothes to

a) give blue colour to clothes
b) to make yellowish tint of clothes white
c) to make them look good
d) to cover the stains on clothes

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Q10. While working in kitchen, Nita spilt a cup of water in the salt jar, and Sona dropped a glass of water in pan filled with all which of the following method should they use to get the things right.

    1. Strainer
    2. Separating Funnel
    3. Distillation
    4. Evaporation.

If N is for Nita, and S for Sona, Tick the correct option.

    a) N-1, S-2
    b) N-2, S-3
    c) N-4, S-2
    d) N-3, S-4

Q11. Mt. Everest is approximately 9000 meter, above sea level. The atmosphere pressure at its summit would be about.

    a) 18 cm of Mercury
    b) 23 cm of Mercury
    c) 30 cm of Mercury
    d) 35 cm of Mercury

Q12. Pressure is inversely proportional to the area of contact. This principle is beautifully demonstrated by the Jacana. The Jacana or lily trotter is a bird capable of walking on floating lily leaves without sinking! Which of the following feet belongs to the Jacana?

Q13. From the above graph we can say that

    a) Atmospheric pressure increases with increasing altitude
    b) atmospheric pressure decreases with increasing altitude
    c) altitude has no influence on the atmospheric pressure

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d) places at higher altitudes are very cool

Q14. Four gas jars are filled with four different gases - hydrogen, Oxygen, Carbon di oxide and Nitrogen.
Some of their physical and chemical properties are outlined in the table below. Identify the gas in gas jars 1,2,3 and 4

a) 1 - Oxygen, 2 - Hydrogen, 3 - Nitrogen, 4 - Carbondioxide
b) 1 - Carbondioxide, 2 - Nitrogen, 3 - Hydrogen, 4 - Oxygen
c) 1 - Nitrogen, 2 - Hydrogen, 3 - Oxygen, 4 - Carbondioxide
d) 1 - Oxygen, 2 - Nitrogen, 3 - Hydrogen, 4 - Carbondioxide

Q15. During on experiment, the boiling point of water was found to be 100.3°C instead of 100 degree C. Assuming that the thermometer used was not faulty, which of the following is not the right reason?

a) The atmospheric pressure could be lower than normal.
b) These may be impurities present in water.
c) The atmospheric pressure could be higher than normal.
d) Both B and C

Q16. In which system of the pig does the bladder worm lodge itself?

a) Muscular system
b) Digestive System
c) Circulatory System
d) Excretory System

Q17. Which one of the graphs indicates that the object is stationary?

Q18. In which of the following figures is the rod XY likely to remain balanced, if it is initially balanced at its center of gravity?

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Q19. Which one of the following graphs correctly represents the effect of heating on the volume of water?

Q20. Study the flow chart carefully and identify the smooth muscle.

Q21. Blood is grouped into A, B, AB and O depending on the presence or absence of an antigen. For an antigen the blood also has antibodies. Observer the diagram and answer the question.

Identify the location of the antigen / antibody in the blood.

    a) On the R.B.C. / In the plasma
    b) In the plasma / In the plasma
    c) In the plasma / On the R.B.C.
    d) On the R.B.C. / On the R.B.C.

Q22. Our body is not crushed by atmosphere pressure since our blood?

    a) exerts pressure which is lesser than the atmospheric pressure
    b) exerts pressure equal to atmospheric pressure
    c) exerts pressure slightly more than atmospheric pressure
    d) does not exert any pressure

Q23. When a fuse is rated 8 Ampere it means

    a) It will not work if current is less than 8 Ampere
    b) It has resistance 8 ohm
    c) It will work only if current is 8 Ampere
    d) It will burn if the current exceeds 8 Ampere

Q24. Two bodies of mass M1 and M2 (M1 > M2) are dropped from a height. The ratio of time taken by them to reach the ground is

    a) M1/ M2

b) M2 / M1

c) M12: M22

d) 1:1

Q25. A toy boat is floating on water in a bucket. If some water is taken from the bucket and poured into the boat, the level of water in the bucket ------.

a) rises

b) goes down

c) remains same

d) first rises and then goes down

PART B - Technical

Q1. In a lathe machine, lead screw is used for

a) cutting gear

b) turning of shaft

c) cut the key slot

d) cut the thread

Q2. Frictional force will increase with increase in

a) Size of the bodies

b) Contact area between two bodies

c) Coefficient of friction

d) None of the above

Q3. One inch equal to how much mm?

a) 25.4

b) 254

c) 2.54

d) None of these

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Q4. If H.P. of a motor is fixed, the relation between torque & rpm will be:

    a) Torque will never change with change in rpm
    b) Torque will change proportional to rpm
    c) Torque will change universally proportional to rpm
    d) None of the above

Q5. In air conditioning, the comfort level increases with ----.

    a) Decrease in humidity
    b) Decrease in temperature
    c) Decrease in dust content
    d) All of the above

Q6. Carburetor is used in

    a) Modern diesel engine
    b) Petrol Engine
    c) Cole Engine
    d) None of the above

Q7. In a pipeline, water is flowing & if we suddenly reduce the diameter, the velocity will increase & pressure will ----?

    a) No relation with cross sectional area
    b) Remain same
    c) increase
    d) decrease

Q8. If one cubic meter of cement equal to 1440 kg, then density of cement will be

    a) 1.440
    b) 14.40
    c) 144.0
    d) 1440

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Q9. Dry bulb temperature & wet bulb temperature are same when

    a) Humidity is 0%
    b) Humidity is 50%
    c) Humidity is 100%
    d) None of the above

Q10. Unit of vibration is ----?

    a) Volt
    b) Hertz
    c) Gallon
    d) None of the above

Q11. Column with following cross section is having maximum resistance against buckling failure (considering cross sectional area are same for all)

    a) Circular
    b) Square
    c) Rectangle
    d) None of the above

Q12. Point of contraflexure means

    a) where shear force is zero & bending moment is max
    b) where bending moment is zero & shear force is max
    c) where shear force & bending moment both are max
    d) None of the above

Q13. Relation between BHP (Brake Horse Power), IHP & FHP (Frictional HP) is

    a) BHP = IHP + FHP
    b) IHP = BHP + FHP

c) FHP = IHP + BHP

d) None of the above

Q14. If drive pulley with 2 diameter rotates at 1440 rpm, then driven pulley with 4 diameter will rotate at ----- rpm?

    a) 1440

    b) 2880

    c) 144

    d) 720

Q15. One kW equal to ----- H.P?

    a) 122

    b) 1.47

    c) 1.37

    d) None of these

Q16. In two stroke diesel engine ------

    a) inlet valves are used

    b) inlet ports are used

    c) None of the above

Q17. In a concrete cantilever beam, the reinforcement should be ----- to take the tension.

    a) in the neutral axis

    b) bottom layer

    c) top layer

    d) None of these

APTITUDE SECTION

Technical & Aptitude ACC Question Paper

Q1. A farmer owns a square land of 15m each side with a pole in one of the corner to which he tied his cow with a rope of length 10m. Find area to the cow to grass (pi=3)

    a) 150 sq.m
    b) 125 sq.m
    c) 75 sq.m
    d) Data missing

Q2. A software company was advertised to recruit people with exposure to C and C++. 241 applications were received and on sorting out it was found that 40 of them do not have exposure to C and C++. 180 of them had exposure to C and 186 of them had exposure to C++. How many of them had exposure to C only?

    a) 165
    b) 15
    c) 180
    d) 150

Q3. A farmer built a fence around his square plot of land. He used 27 fence poles on each side of the square. How many poles did he need altogether?

    a) 100
    b) 104
    c) 109
    d) 110

Q4. On Jan 10th, with the temperature at 15 degree farenheit, it snows all day. On how many lines will service be affected, including both morning and afternoon?

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

ANS: d

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Q5. Diagrammatic series contains 6 questions

Q6. On the first test of the semester, Kiran scored 60. On the last test of the semester, he scored 75%. By what percentage did his score improve?

    a) 25%
    b) 32%
    c) 23%
    d) 45%

Q7. M men agree to purchase a gift for Rs. D. If three men drop out how much more will each have to contribute towards the purchase of the gift?

    a) D/ (M - 3)
    b) MD/ 3
    c) M/ (D - 3)
    d) 3D/ (M2 - 3M)

Q8. A three digit number consists of 9, 5 and one more number. When these digits are reversed and then subtracted from the original number the answer yielded will consist of the same digits arranged in a different order. What is the third digit?

    a) 1
    b) 2
    c) 4
    d) 4.5

Q9. On Aug 15th with the temperature at 97 degrees farenheit it begins to rain at 1 PM. What is the minimum number of lines on which service will be affected?

    a) 2
    b) 3

c) 4

d) 5

ANS: c

Q10. Average of x & y is 12, if z is 9, what is the average of x, y, z?

a) 11

b) 6.5

c) 5

d) data missing