MANAV RACHNA INTERNATIONAL SCHOOL
Scholarship Test Paper
For Grade – VII (Session 2022-23)
Current Grade of the Student – VI (Session 2021-22)

Date: 19.02.2022
Duration: 2 Hours   **M.M.: 100**

KINDLY FILL IN THE DETAILS

Name: _____

Father's Name: _____

Mother's Name: _____

Examination Centre: Manav Rachna International School _____

Name and Signature of the Invigilator: _____

GENERAL INSTRUCTIONS:
SECTION – A: Logic and Reasoning: **20 marks** (Each question carries 2 marks)
SECTION – B: English: **20 marks** (Marks have been mentioned against the questions)
SECTION – C: Math: **30 marks** (Each question carries 1 mark)
SECTION – D: Science: **30 marks** (Each question carries 1 mark)
- All sections are compulsory.
- Read each question carefully before answering.
- **Objective Questions need to be tick marked in the question paper itself and submitted.**
- **Subjective Questions need to be attempted in the answer sheets provided and submitted.**

_____

SECTION A
LOGIC AND REASONING

Q1.   Choose the pair that best represents a similar relationship to the one expressed in the original pair of words.
SOUND: CACOPHONY

a) taste : style   b) touch : massage
c) smell : stench   d) sight : panorama

Q2.   Today is Monday. After 61 days, it will be

a) Tuesday   b) Monday   c) Sunday   d) Saturday

Q3.   In a certain code language 24685 is written as 33776.How is 35791 written in that code?

a) 44882   b) 44880   c) 46682   d) 44682

Q4. Study the following arrangement carefully and answer the questions given below:
R D A K 5 B I 2 M J E N 9 7 U Z V 1 W 3 H 4 F Y 8 P 6 T G
How many vowels are there in the above arrangement, each of which is immediately preceded by a number and immediately followed by another consonant?

a) None   b) One   c) Two   d) Three

Q5. Four people witnessed a theft. Each gave a different description of the thief. Which description is most appropriate?

a)   He was average height, thin, and middle-aged.
b)   He was tall, thin, and middle-aged.
c)   He was tall, thin, and smart.
d)   He was tall, of average weight, and middle-aged

Q6. Look at this series: 664, 332, 340, 170, ____, 89. What number should fill the blank?

a) 85   b) 97   c) 109   d) 178

Q7. If the time in a clock is 8 hours 20 minutes, then what time does it show on the mirror?
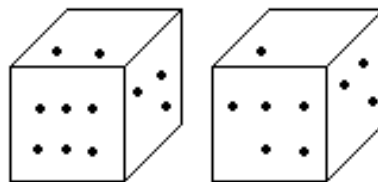
a) 3 hours 40 minutes   b) 2 hours 10 minutes
c) 3 hours 15 minutes   d) 2 hours 50 minutes

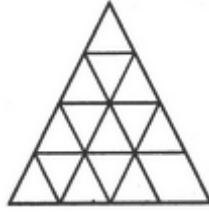Q8. Look carefully at the sequence of symbols to find the pattern. Select the correct pattern.
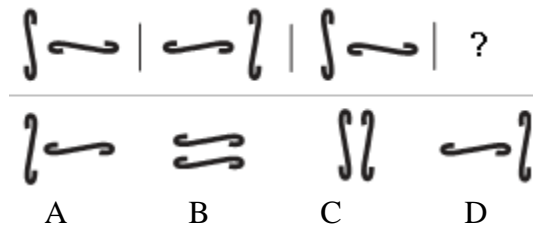
a) 1   b) 2   c) 3   d) 4

Q9. Two positions of dice are shown below. How many points will be on the top when 2 points are at the bottom?

a) 2   b) 4   c) 1   d) 5

Q10. Find the minimum number of straight lines required to make the given figure.

a) 15   b) 13   c) 10   d) 11

SECTION B
ENGLISH

Q1. **Read the following passage and answer the questions that follow:**

Every time a child takes a soft drink, he's laying the ground work for a dangerous bone disease. No, fizzy and sugary drinks don't cause osteoporosis. But, because they are often a substitute for a glass of milk, kids are not getting the calcium and vitamin D they need to build a strong skeleton. Many of them also lead a sedentary lifestyle, so they aren't getting the bone building benefits from vigorous exercise either. These children tend to suffer from brittle bones and tend to suffer from fractures later in life. They could be at a risk of being diagnosed with osteoporosis at an early age.

The Indian Society for Bone and Mineral Research, a body of osteoporosis experts is trying to spread awareness about this bone crippling disease. Osteoporosis starts in childhood but has consequences later in life. The condition causes bones to become riddled with holes, like the framework of a house that's been attacked by termites. This can lead to broken bones, which in turn can cause deformity, chronic pain or disability.

Osteoporosis can be fatal: up to 25 per cent of older people who suffer a broken hip die within a year. Osteoporosis isn't just your grandmother's health threat. Although it strikes over 50 million women in India, it also menaces over 12 million men. Osteoporosis causes loss of height, pain in joints and back, fractures and a fear of fractures, and can be very depressing. So it is important that we adopt preventive measures, to save millions of people.

There is a new medical understanding of the best ways to protect ourselves and our children. "Simple lifestyle changes and nutrition will help save your bones," says Dr. Mittal. To get us moving in the right direction, he says, "It's never too late to adopt bone-friendly habits—exercise, get enough sunlight, and have adequate calcium.

**Based on your reading and understanding of the above passage, answer the questions below:**

a.	Why are fizzy and sugary drinks blamed for osteoporosis?	1
b.	Think and write two bone-friendly habits other than those mentioned in the passage	2
c.	When does osteoporosis become apparent? Why is it called fatal?	2
d.	Can osteoporosis be called your grandmother's health threat? Why/ Why not?	2
e.	What has the state of a disease infected person been compared to? Explain.	1
f.	Find the word in the passage which means 'deadly'.	1
g.	Pick out the word from the passage which could be a synonym for 'continuing'.	1

Q2. We have advanced with the usage of technology in the learning and work space. How do you think students have developed skills to use technology for their learning specifically during the pandemic period? Write a paragraph in about 150-200 words.   10

Q1.   Find the value of the given expression:
$[(-23) + 23 - 14 + 1 - 1 + 14] \times 25 + [23 - 14 + 1 - 1 - 23] \times 0$

a) 0   b) – 23   c) 14   d) 25

Q2.   State whether the following statements are true / false:
i)   The identity of an integer under multiplication is zero.
ii)   The product of a negative number when multiplied odd number of times is positive
iii)   For any three integers x, y and z
        $(x - y) - z = (x - y)(y - z)$

	(i)	(ii)	(iii)
a)	False	False	True
b)	True	True	True
c)	True	False	False
d)	False	False	False

Q3.   If 3A : 2B : 5C then find A : B : C

a) 5 : 10 : 25   b) 10 : 15 : 6   c) 3 : 2 : 5   d) 1 : 2 : 3

Q4.   The ages of Amit and Archana are in the ratio 4 : 5. If Amit is 4 years 8 months old, find the age of Archana.

a) 7 years 2 months   b) 5 years 2 months
c) 5 years 10 months   d) none of the above

Q5.   Mr. Mukherjee spends $\dfrac{2}{7}$ of his income on rent and $\dfrac{3}{5}$ on his food and other expenditures. Rest of the amount is saved. How much part of his income is saved?

a) $\dfrac{3}{35}$ b) $\dfrac{4}{35}$ c) $\dfrac{5}{35}$ d) $\dfrac{6}{35}$

Q6.   The value of $5 - \dfrac{8}{4 + \dfrac{2}{3 - 1.2}}$

a) 1.69   b) 3.86   c) 3.43   d) 3.13

Q7.   The quotient when 0.004992 is divided by 0.312 is

a) 0.0016   b) 0.16   c) 0.016   d) 16

Q8. What is the measure of ∠ACB in the given figure if ∠2 = 30°, ∠x = 70° and AB || CE
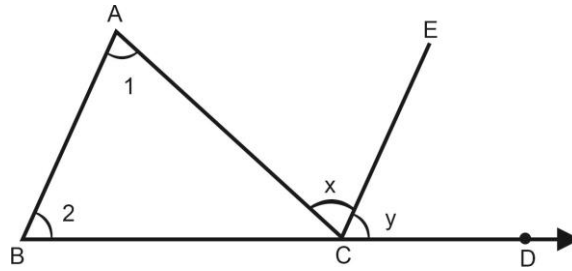
a) 110°   b) 75°   c) 80°   d) 85°

Q9. The number of faces in a triangular pyramid is

a) 3   b) 4   c) 6   d) 8

Q10. Find the smallest number of 5 digits which is exactly divisible by 60, 90 and 80

a) 10090   b) 10100   c) 10080   d) none of these

Q11. Multiply $\left(a^2 + ab + b^2\right)\left(a^2 - ab - b^2\right)$

a) $a^4 - a^2b^2 - 2ab^3 - b^4$ b) $6a^2b - 3ab + 10a - 25$
c) $5ab - 3a^4 + 6b^4$ d) none of these

Q12. If the sides of a triangle are 18cm, 24cm and 30cm, find the area of the triangle.

a) $216cm^2$ b) $210cm^2$ c) $21cm^2$ d) none of these

Q13. Santa Claus has a bag of sweets. If he gives 8 sweets to every child, he is left with 24 sweets. If he gives 10 sweets to every child, he needs another 20 sweets. How many children does he give sweets to?

a) 24   b) 28   c) 22   d) 26

Q14. The sum of Mona, her mother and grandmother's age is 100 years. Her grandmother is twice as old as her mother. Her mother is 28 years older than Mona. How old is the grandmother?

a) 60 years   b) 64 years   c) 68 years   d) 58 years

Q15. The perimeter of a rectangle is 100m. If the length is decreased by 2m and the breadth is increased by 3m, then the area is increased by 44 sq. m. Find the length and breadth of the rectangle.

a) 30m, 20m   b) 40m, 30m   c) 50m, 40m   d) 100m, 90m

Q16.   If AY is parallel to CX, then find ∠ABC
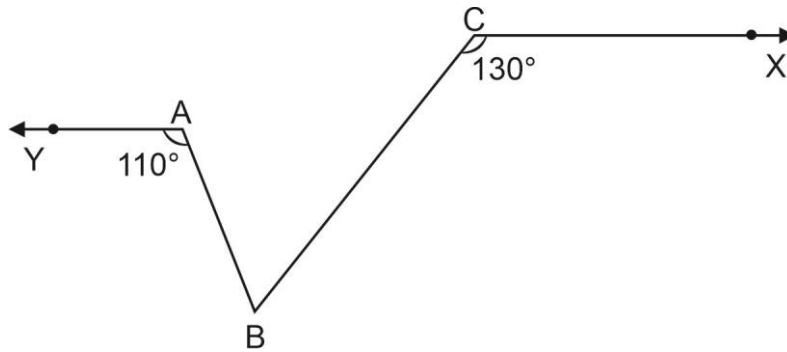
a) 45°   b) 60°   c) 75°   d) 90°

Q17.   The diameter of a wheel of a bus is 770cm. How much distance will it cover in 100 revolutions?

a) 2.85km   b) 5.85km   c) 9.85km   d) 2.42 km

Q18.   Simplify:
23.45 + 34.56 – 45.3 x 12.24 ÷ 12.24

a) 12.303   b) 12.704   c) 12.710   d) 12.320

Q19.   Seven-tenths of half a century is _____.

a) 45   b) 35   c) 70   d) 140

Q20.   In a class, 20 students are boys and 12 girls. The total strength of teachers in the school is the difference of total number of boys and girl students in the school. If the number of chairs in the class is 10 times the difference between the number of boys and girl students in the class, then which of the following expression is correct about number of chairs in the class?

a) 20x (12 – 10)   b) 10x (20 – 12)   c) 10x (10 – 20)   d) none of these

Q21.   If one third of one fourth of a number is 15, then how much is three tenth of that number?

a) 35   b) 36   c) 45   d) 54

Q22.   A traffic policeman is standing looking east. In which direction will he look if he turns right through two right angles?

a) South   b) North   c) East   d) West

Q23.   Find the least number which when divided by 15, 20, 48 and 36 leaves remainder 9 in each case.

a) 726   b) 727   c) 728   d) 729

Q24. How many pieces of length $2\dfrac{2}{7}$ metres can be cut from $6\dfrac{6}{7}$ metres of cloth?

a) 2   b) 3   c) 4   d) 1

Q25. If $x = 11\dfrac{5}{17}$ and $y = 20\dfrac{5}{85}$ then x + y =

a) $31\dfrac{4}{85}$ b) $28\dfrac{6}{17}$ c) $130\dfrac{3}{10}$ d) $31\dfrac{6}{17}$

Q26. How many tiles 40cm x 40cm each will be required to pave a footpath 1m wide carried round the outside a rectangular garden measuring 1800 cm x 28m?
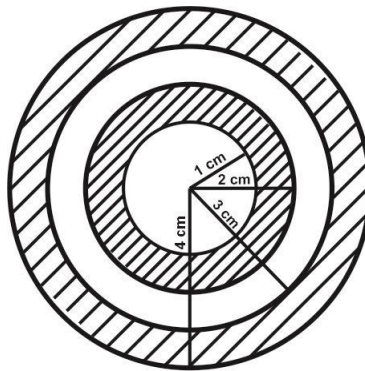
a) 600   b) 52000   c) 9900   d) 5250

Q27. Divide $2x^2 + 3x + 1$ by (x + 1)

a) 3x + 2   b) 2x + 1   c) 5x – 3   d) none of these

Q28. If one-eighth of a pencil is black, half of the remaining is yellow and the remaining 3½ cm is blue, then what is the length of the pencil?

a) 6cm   b) 7cm   c) 8cm   d) 11 cm

Q29. In the following figure, the total area of shaded region is (take $\pi = 3.14$) :

a) 31.4 cm^2 b) 32.2 cm^2 c) 35.4 cm^2 d) 24.4 cm^2

Q30. Find the area of the circle whose circumference is equal to the sum of the circumference of two circles with radii 3cm and 4cm respectively (take $\pi = 22/7$).

a) 154cm^2 b) 150cm^2 c) 274cm^2 d) 28cm^2

SECTION D
SCIENCE

Q1.   **Statement 1:** Solubility of a substance changes with temperature**.**
Statement 2: Heat supplied is used to increase the kinetic energy of the molecules

a) Both statements 1 & 2 are true and statement 2 is the correct explanation of statement 1
b) Both statements 1 & 2 are true but statement 2 is not the correct explanation of statement 1
c) Statement 1 is true and statement 2 is false
d) The above given statements 1 and 2 are incorrect.

Q2.   Pat and Benjamin measured their body temperature. Pat found his to be 98.6 °F and Benjamin recorded 37 °C. Which of the following statement is true?

a) Pat has a higher body temperature than Benjamin.
b) Pat has a lower body temperature than Benjamin.
c) Both have normal body temperature.
d) Both are suffering from fever.

Q3.   Which of the following statement is NOT true?

a) Fish has streamlined body
b) The gills in fish help to maintain body balance in water
c) Fins in fish body helps in swimming
d) Air bladder present in fish body helps in floating in water

Q4.   Ravi saw his younger brother inserting a nail inside a plug socket. He immediately used a stick to pull out his brother's hand. Identify the material with which the stick is made:

a) Silver   b) Graphite   c) Copper   d) Porcelain

Q5.   Roughage or dietary fibre is made up of

a) Proteins   b) Insoluble Carbohydrate
c) Fats   d) Soluble Carbohydrates

Q6.   Two immiscible liquids can be separated by which of the following methods?

a) Sieving   b) Sedimentation   c) Separating funnel   d) Crystallization

Q7.   The process shown in the figure is used to remove the fibre from its stem. Can you identify the process?

a) Weaving   b) Threshing   c) Ginning   d) Retting

Q8. A person is suffering from vitamin deficiency disease having symptoms of scaly skin sores in sun exposed areas, pain in abdomen and inflamed mucous membrane. He was asked to take liver, chicken, fish, cereals, peanuts and legumes in his diet. Identify the vitamin whose deficiency is causing the mentioned symptoms:

a) Thiamine   b) Riboflavin   c) Niacin   d) Retinol

Q9. The complex organic compounds occurring in our food are necessary for proper growth, good vision, digestion, healthy teeth and immunity. These are basically fat soluble and water soluble vitamins. Suggest two such vitamins that are synthesized in human body.

a) Vitamin A and C   b) Vitamin K and E   c) Vitamin D and K   d) Vitamin B and C

Q10. Rema was concerned about the amount of calories she consumes in a day. Help her in understanding the conversion:

a) One gram of carbohydrate gives 4 cal of energy
b) One gram of carbohydrate gives 2.4 cal of energy
c) One gram of carbohydrate gives 5 cal of energy
d) One gram of carbohydrate gives 4.2 cal of energy

Q11. Observe the given figure and choose the correct option for seed dispersal
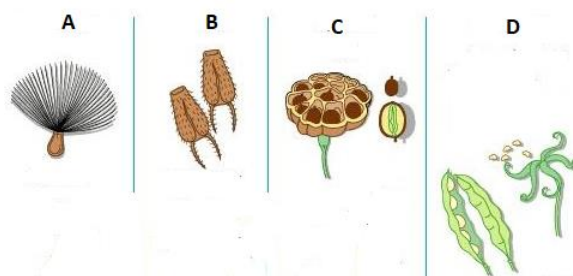
a) A- wind, B- animal, C- bursting , D-water
b) A-animal, B-bursting, C-water, D-wind
c) A-water, B-animal, C-wind, D-bursting
d) A-wind, B- animal, C-water, D-bursting

Q12. The following figure represents the molecular arrangement at room temperature. Which of the given option is appropriate?
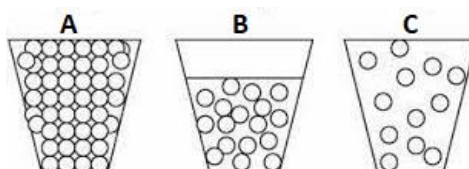
a) A-Iron, B- Oxygen, C-Bromine   b) A-Oxygen, B-Bromine, C-Iron
c) A-Bromine, B-Iron, C-Oxygen   d) A- Iron, B-Bromine, C- Oxygen

Q13.   By which method is heat transferred to water in the set-up?

a) Radiation   b) Convection   c) Conduction   d) Friction

Q14.   Darshan wanted to purchase a suitable fabric for the summer season. But he was confused with the properties of fibres and hence wants your help to choose the right one.

a) Cotton fibre-eco-friendly, water absorbent and keeps the body cool.
b) Silk fibre-non-eco-friendly, fluffy, retains heat
c) Wool-eco-friendly, strong, catches fire easily and lustrous
d) Linen-non-eco-friendly, water resistant, catches fire easily

Q15.   Which of the following statement is NOT true?

a) Chlorophyll acts as a component for photosynthesis.
b) Oxygen is given out during plant respiration.
c) Plant root hair helps in respiration.
d) Carbon dioxide is given out during plant respiration.

Q16.   Riya was confused with the purpose of the activity conducted on the "effect of temperature on solubility of sugar in water". Kindly help her out by choosing the correct option.
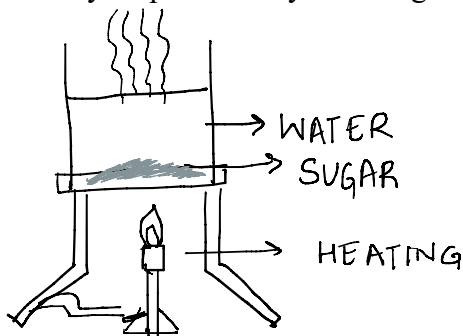

a) Increase in temperature reduces the solubility of the given solute
b) Change in temperature has no effect on solubility of the given solute
c) Increase in temperature increases the solubility of the given solute
d) Data is insufficient

Q17.   Salt is added to water as shown in the figure. Help Raj to identify the correct option
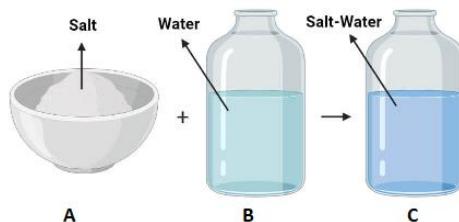
a) A-solute, B-solution & C-solvent   b) A-solvent, B-solute & C-solution
c) A-solution, B-solvent & C-solute   d) A-solute , B-solvent & C-solution

Q18. Observe the given figure A and B. Which of the given statements are true for the processes shown?
    I.   Sugar in porcelain dish after heating results in new substance.
    II.   Sugar dissolved in water results in new substance
    III. Sugar in porcelain dish after heating will retain its original property.
    IV.   Sugar dissolved in water will retain its original property
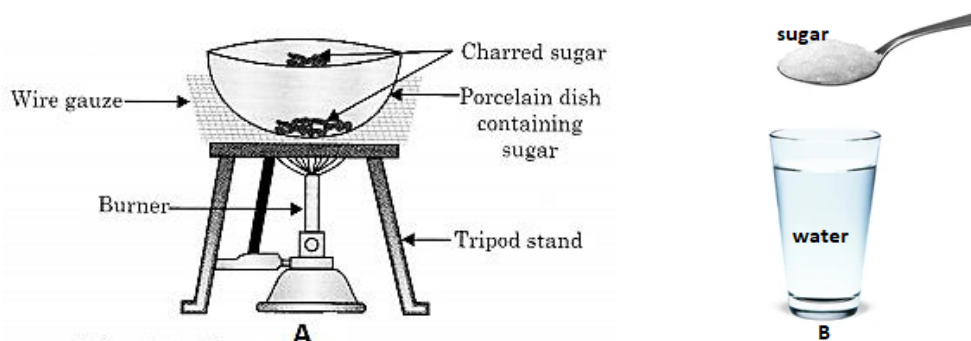
a) Statements I, II, III and IV are incorrect   b) Statements I & III are correct.
c) Statements II & IV are correct.   d) Statements I & IV are correct

Q19. Observe A and B from the given figure and choose the correct statement/s accordingly.
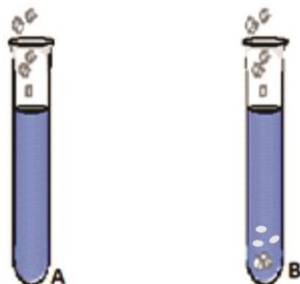
    I: Test tube A cannot dissolve any more solute.
    II: Test tube B cannot dissolve any more solute.
    III. Test tube A is a saturated solution
    IV: Test tube B is an unsaturated solution.

a) Statement I and III are correct   b) Statement II and IV are correct.
c) Statement I and IV are correct.   d) Statement II and III are correct

Q20. Riyaz shone a torch light on a cellophane paper, vegetable oil and an apple. She has noted down the observation in a paper, but the paper got misplaced under the table. Kindly help her out in recollecting her recordings.

a) Cellophane paper- opaque, vegetable oil- translucent, apple- transparent
b) Cellophane paper- translucent, vegetable oil- transparent, apple- opaque
c) Cellophane paper- transparent, vegetable oil-opaque, apple-translucent
d) Cellophane paper-transparent, vegetable oil- translucent, apple -opaque

Q21. The given figure shows the laws of reflection. Which of the following statements are appropriate?
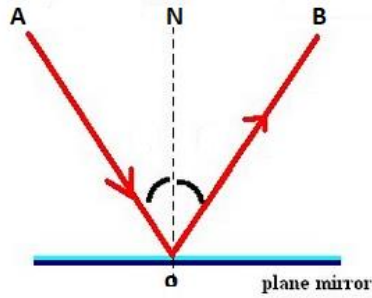
I   <AOB forms angle of incidence
II   <BOA forms angle of reflection
III   < AON forms angle of incidence
IV   <BON forms angle of reflection
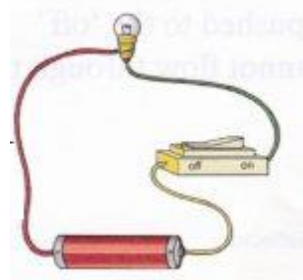
a) All three statements I, II III and IV are correct
b) Statements I and II are correct
c) Statements II and III are correct
d) Statement III and IV are correct

Q22. Identify the natural phenomenon and its occurrence depicted in the figure.
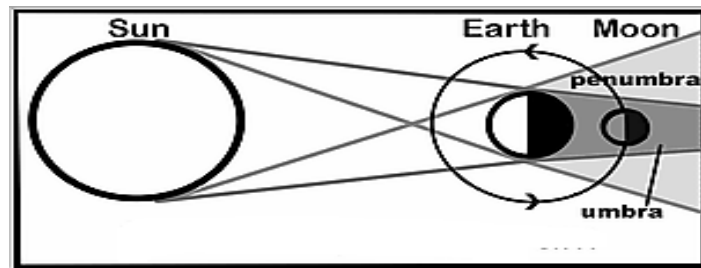
a) Solar eclipse & new moon day   b) Lunar eclipse & new moon day
c) Solar eclipse & full moon day   d) Lunar eclipse & full moon day

Q23. Raj tried to connect the bulb with electrical elements. But he could not succeed in completing the circuit even though it was switched on. What could have gone wrong in the connection?

I.   Conducting wire is not connected to the cell.
II.   Electric cell is discharged.
III.   Switch is not connected.
IV.   Bulb is fused.

a) Statements I, II, III & IV are correct
b) Statements I & III are correct
c) Statements I & II are correct
d) Statements II & IV are correct

Q24. Choose the correct option for the figures given
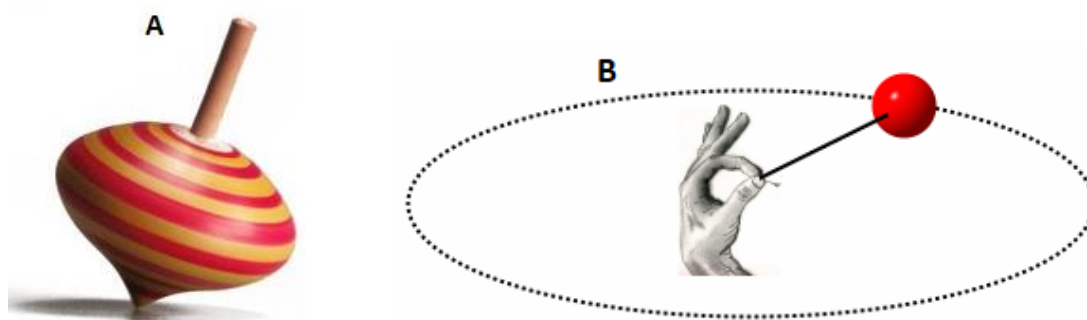
a) A- Circular motion & B- Rotational motion
b) A-Curvilinear motion & B-Oscillatory motion
c) A- Rotational motion & B-Circular motion
d) A- Oscillatory motion & B-Circular motion

Q25. Ravi was testing the property of the object that he got. Meanwhile he brought a magnet near the object that he had. What are the possible assumptions that will help to prove if the given object is a magnet?

a) The given object will repel away from the magnet
b) The given object will only attract towards the magnet
c) No effect of magnet on the given object
d) Given data is not sufficient

Q26. Shyam was trying to read the content on his LPG cylinder kept at home. His father explained about the properties of matter stored inside the cylinder. Choose the correct option to identify the property.

a) Molecular attraction is maximum hence least compressible
b) Molecular attraction is medium hence not at all compressible
c) Molecules can slide over hence medium compressible
d) Molecular attraction is minimum hence highly compressible

Q27. Sheela saw that her little sister was trying to connect a circuit and was running short of connecting wire. Sheela immediately attached an article to connect which made the bulb glow. Choose the correct option to identify the property of article chosen by Sheela.

a) It is non-lustrous and smooth
b) It is hard and transparent
c) It is a thermal insulator
d) It is an electrical conductor

Q28. Raj saw a plant in his garden as shown in the figure. He was surprised to see the unique feature of the plant. According to you which of the following statement is most appropriate?

I. It is a producer
II. It is dependent on insects for its food

a) Statement I as it was green in colour
b) Statement II as it traps insects for its food
c) Statement I and II as it is an insectivorous plant
d) Both statements I and II are incorrect as it is a saprophyte

Q29. Bindia accidentally fell down and her right forearm was plastered. Her friend asked her about the accident and she was explaining about the fracture of her arm. Which of the following statement can be true for the given situation?
Statement 1: Forearm consists of humerus bone which is fractured.
Statement 2: Ligaments the strong tissues that attach muscles to bones might be torn.

a) Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
b) Both statement s 1 and 2 are true but statement 2 is not the correct explanation of statement 1
c) Statement 1 is false and statement 2 is true.
d) Both the given statements 1 and 2 are incorrect.

Q30. Which of the following option is appropriate?

a) Joints of cranium - slightly movable joint
b) Joints in shoulder- freely movable joint
c) Joints of lower jaw- fixed joint
d) Joints between vertebrae – immovable joint