IMPORTANT INSTRUCTIONS

- The maximum marks are 300. Time allotted is **90 MINUTES.**
- There are five sections in the question paper having total **75 questions:**
  - Section – A : Maths (20 Questions)
  - Section – B : Science (20 Questions)
  - Section – C : English (15 Questions)
  - Section – D : Aptitude (10 Questions)
  - Section – E : General Knowledge (10 Questions)
- Each question carries **4 marks.**
- **Negative Marking : ¼ (One-fourth) mark** will be deducted for every incorrect answer.
- **Use only BLUE / BLACK ball pen to fill the circles in bubble sheet.**
- Use of PENCIL is strictly **not allowed.**
- **Use of marker and correction pen is strictly prohibited.**

SECTION – A
MATHS

Choose the correct option.

1) Which of the following is a factor of the polynomial $p(x) = x^4 + 5x^3 + 9x^2 + 15x + 18$?

a) $x^2 + 5x + 6$ b) $x^2 - 5x + 6$

c) $x^2 + 5x - 6$ d) $x^2 - 5x - 6$

2) Find the value of a and b respectively, if $\frac{5+\sqrt{3}}{7-4\sqrt{3}} = 47a + \sqrt{3}b$

a) 2, 1 b) 1, 27

c) 11, 28 d) 2, 38

3) In a class test of Mathematics, 10 students scored 73 marks each, 12 students scored 60 marks each and 8 students scored 40 marks each. The mean of their scores is_____.

a) 27 b) 59

c) 54 d) 57

4) Two pipes X and Y can fill a cistern in 24 min and 32 min respectively. If both the pipes are opened together, then after how much time Y should be closed, so that the tank is full in 18 minutes?

a) 6 min b) 8 min

c) 10 min d) None of these

5) Which of the following options is correct?

Statement-1: If any two angles and non-included side of one triangle are equal to the corresponding angles and side of another triangle, then the triangles are congruent (AAS congruence criterion).

Statement-2: If in two right triangles, hypotenuse and one side of a triangle, are equal to the hypotenuse and one side of other triangle, then the two triangles are congruent (RHS congruence criterion).

a) Statement-1 is true but Statement-2 is false.
b) Statement-1 is false but Statement-2 is true.
c) Both Statement-1 and Statement-2 are true.
d) Both Statement-1 and Statement-2 are false.

6) Fill in the blanks

In coordinate geometry, the coordinate axes divide the plane into four parts called _____**P**_____. The point of intersection of the axes is called _____**Q**_____. The sign of abscissa and ordinate will be same in _____**R**_____ and _____**S**_____ quadrants

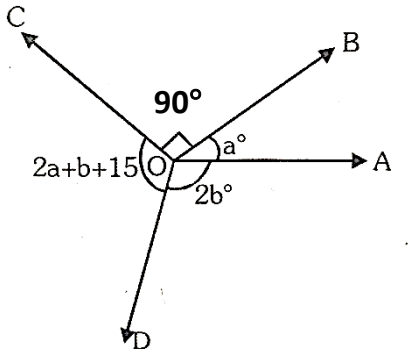
	P	**Q**	**R**	**S**
a)	Quadrant	x-axis	II	III
b)	Quadrant	origin	I	III
c)	Quadrant	origin	I	IV
d)	Quadrant	origin	I	II

7) Find the area of a triangle having perimeter 32 cm, one side 11 cm and difference of other two sides is 5 cm.

a) $\sqrt{30}cm^2$ b) $8\sqrt{30}cm^2$
c) $5\sqrt{30}cm^2$ d) $3\sqrt{10}cm^2$

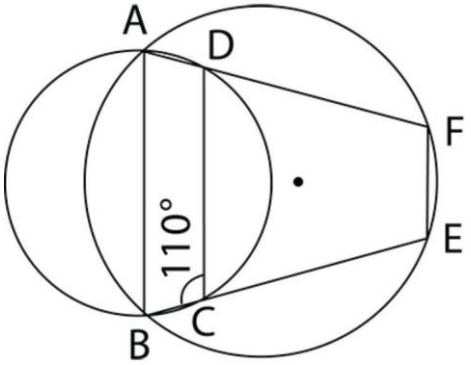
8) In the given figure, 2b − a = 65° and ∠BOC = 90°, find the measure of (i) ∠AOB, (ii) ∠COD

	i)	ii)
a)	35°	90°
b)	125°	145°
c)	25°	115°
d)	35°	135°



9) In the given figure, ABCD and ABEF are two cyclic quadrilaterals. If ∠BCD = 110°,then ∠BEF = _____

a) 55°
b) 70°
c) 110°
d) 90°



10) A closed metallic cylindrical box is 1.25 m high and its base radius is 35 cm . If the metal sheet costs Rs. 80 per m^2, then the cost of the material used in the box is _____.

a) Rs. 281.60 b) Rs. 290

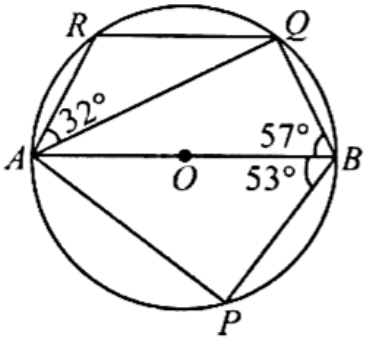
c) Rs. 340.50 d) Rs.500

11) In the given figure (not drawn to scale), AB is the diameter of the circle with centre O. If ∠ABQ = 57° , ∠QAR = 32° and ∠ABP = 53° then find:

i) The value of ∠BQR

ii) The ratio of measure of ∠BPA to ∠BAQ.

	i)	ii)
a)	140°	12:7
b)	135°	24:13
c)	150°	8:5
d)	115°	30:11



12) In a hostel of 300 students, there is sufficient food for 24 days. Some students left the hostel and now the food lasts for 36 days, then how many students have left the hostel.

a) 175 b) 150

c) 200 d) 100

13) The product of $(a+b)(a-b)(a^2-ab+b^2)(a^2+ab+b^2)$ is equal to

a) a^6+b^6 b) a^6-b^6

c) a^3-b^3 d) a^3+b^3

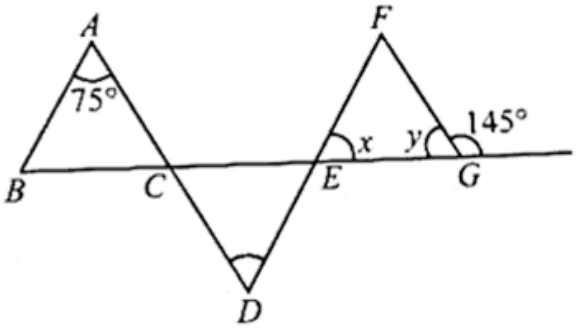
14) In the given figure, AB || DF and AD || FG. Find the value of x – y

a) 70°

b) 45°

c) 35°

d) 65°



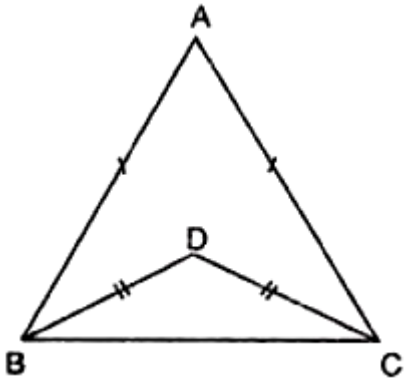
15) In the given figure (not drawn to scale), AB= AC and DB = DC. Find the value of ∠ABD : ∠ACD

a) 2 : 3

b) 1 : 1

c) 3 : 2

d) 1 : 2



16) Find the greatest value of n such that the number 1578n is divisible by 3.

a) 3 b) 9

c) 6 d) 8

17) If ∠A and ∠B are complementary angles and ∠A is x, then which equation can be used to find ∠B which is denoted by y?

a) $y = (90° + x)$ b) $y = (90° - x)$

c) $y = (180° - x)$ d) $y = (x + 180°)$

18) The weight of 15 students are as follows :
31, 28, 35, 29, 27, 32, 41, 38, 37, 40, 43, 34, 36, 32, 30
Find:

I. Mean of data
II. Median of data
III. Mode of data

	I	II	III
a)	36	34	30
b)	34.2	34	32
c)	38	32	30
d)	36	34	32

19) The difference between the present ages of two persons is 10 years. Fifteen years ago, the elder was twice as the younger one. The present age of elder person is

a) 55 years b) 45 years

c) 35 years d) 25 years

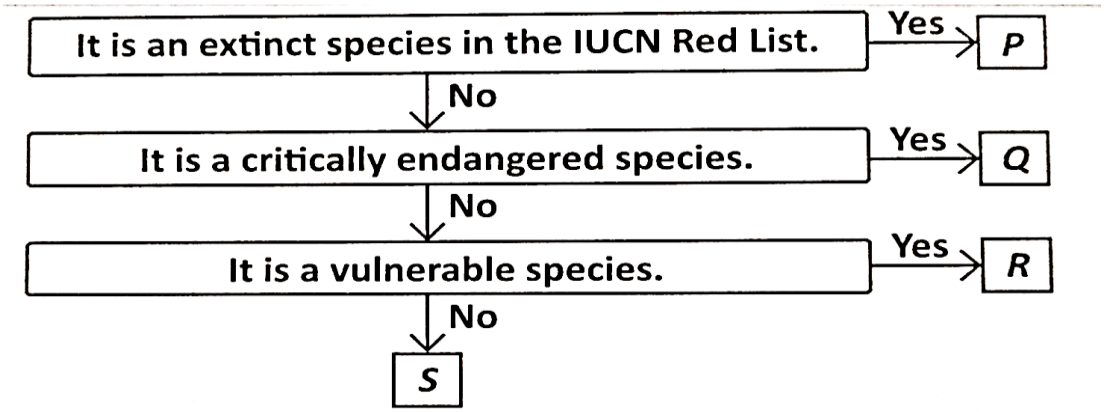
20) Area of rectangle with length $x^2 + 2xy + y^2$ and breadth $x^2 - 2xy + y^2$ is _____.

a) $x^4 + y^4 - 2x^2y^2$ b) $x^2 + y^2 - 4x^2y^2$

c) $x^4 + y^4 + 2x^2y^2$ d) $x^4 - y^4 + 2x^2y^2$

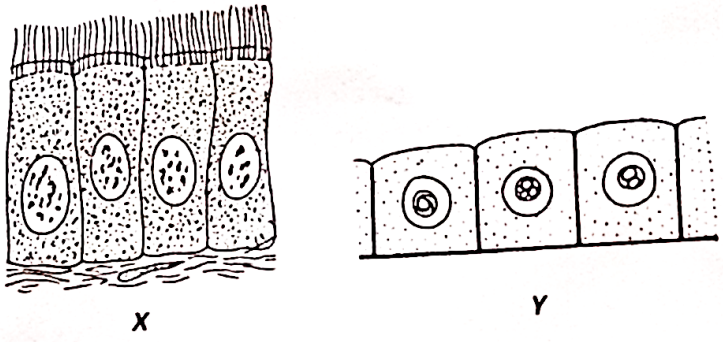
SECTION – B
SCIENCE

21) Refer to the given flow chart and select the option that correctly identifies P-S.



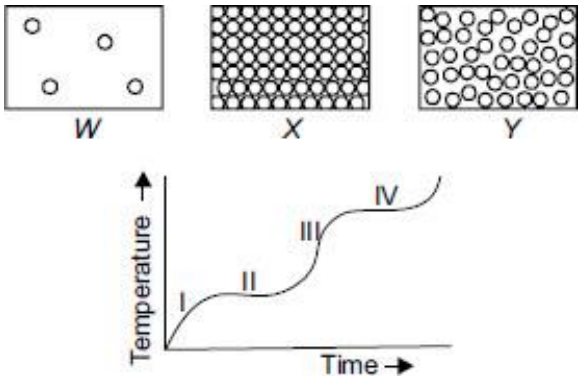
	P	Q	R	S
a)	Barasingha	Lion-tailed macaque	Passenger pigeon	Great Indian bustard
b)	Tsamanina devil	Asiatic lion	Great Indian bustard	Passenger pigeon
c)	Dodo	Hawaiian crow	Ivory billed woodpecker	Asian elephant
d)	Sea mink	gharial	One horned rhino	Bald eagle

22) Identify the epithelial tissues X and Y shown in the given figures and select the correct statement regarding them.



a) X is arranged in many layers to prevent wear and tear while the cells of Y are modified to secrete chemicals.
b) X lines the trachea, kidney tubules and fallopian tubes while Y lines the small salivary ducts, pancreatic ducts and thyroid gland
c) X is commonly known as pavement epithelium while Y is commonly known as transitional epithelium.
d) Both a) and c)

23) Diagrams W, X and Y represent the molecular arrangement of particles of three different states of a substance at different temperatures and the graph represents the heating curve of the substance at one atm pressure.

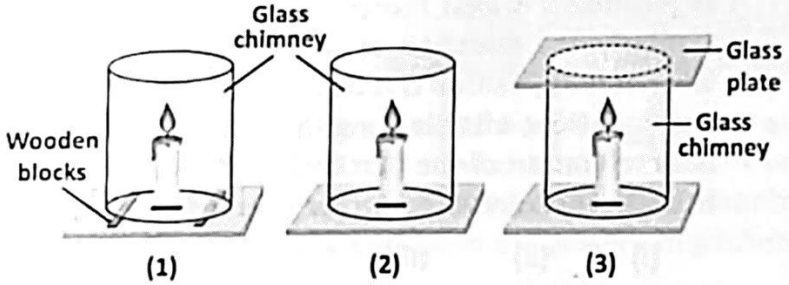


Now, based on these, select the incorrect statements from the following.

i) In region II, the substance exists both in state X and state Y
ii) The direct conversion of state W to state Y is called sublimation.
iii) State W can be converted to state Y by reducing the pressure and increasing the temperature.
iv) Regions I and III represent states Y and X respectively.
v) In region IV, the substance exists both in state Y and state W.

a) i) and v) only
b) i), ii) and iii) only
c) ii), iii) and iv) only
d) i) and iv) only

24) Observe the given figure carefully. Which of the following statements is/are correct?

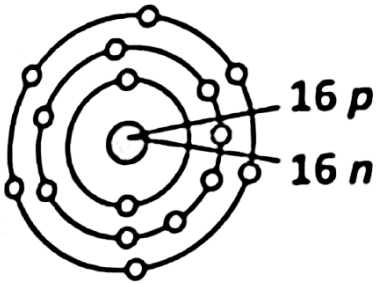


i) After some time flame goes off in candle (1) as oxygen is not available.
ii) In candle (2), flame flickers and produces smoke
iii) Candle (3) burns freely due to presence of oxygen.

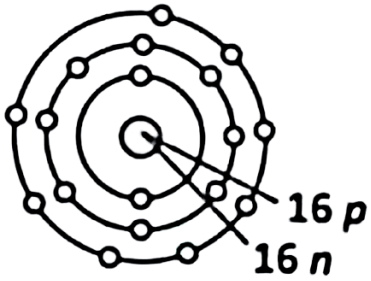
a) i) and iii) only
b) ii) only
c) i) only
d) ii) and iii) only

25) The atomic structures of P, Q, R and S are shown in the given figures

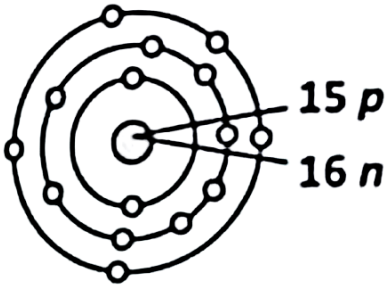
P)



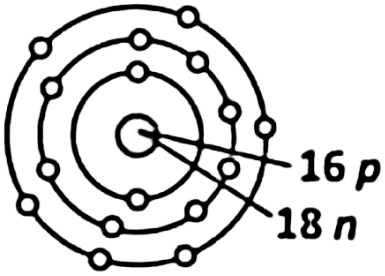
Q)



R)



S)



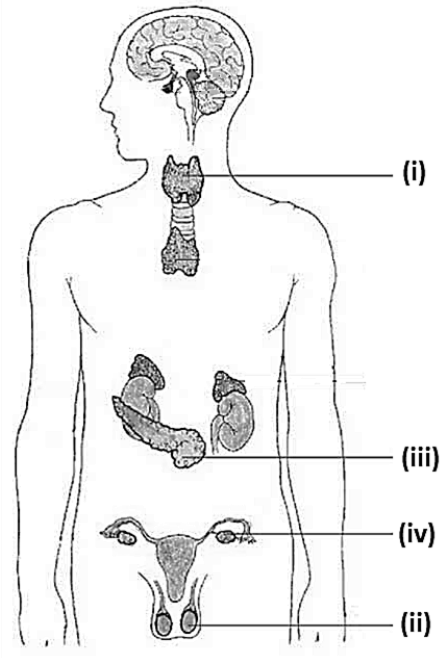
Select the incorrect statements from the following.

i) P and S are isotopes of each other and therefore they will have different chemical properties.
ii) P and R are isobars.
iii) S is an isotope of R.
iv) Q is an anion of P.

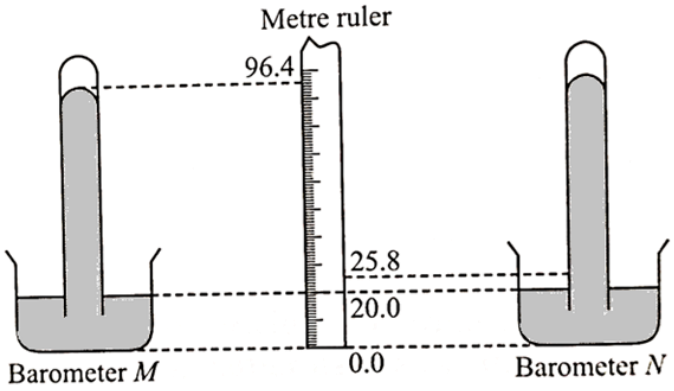
a) i) and iii) only
b) ii) and iv) only
c) i) and iv) only
d) i), ii) and iii) only

26) Identify the glands (i)-(iv) in the given figure and select the incorrect match of gland with its secretion.

	Gland	Hormone secreted
a)	(i)	Thyroxine
b)	(ii)	Relaxin
c)	(iii)	Insulin
d)	(iv)	Inhibin



27) A scientist is keen to determine the height of Mt. Everest. He installed two mercury barometers on the Mt. Everest. One barometer, M was installed at the base of the mountain while the other barometer, N was installed at the top, and readings were taken using a metre rule placed against them as shown in the given figures.



If the density of mercury is 13,600 kg/m^3 and gravitational field strength is 10 N/kg, then the air pressure at the base of the mountain is _____.

a) $1.31 \times 10^5 Nm^{-2}$ b) $7.88 \times 10^3 Nm^{-2}$

c) $1.04 \times 10^5 Nm^{-2}$ d) $7.88 \times 10^5 Nm^{-2}$

28) Select the odd one out on the basis of methods of biodiversity conservation.

a) Zoological park b) National park

c) Botanical garden d) Gene bank

29) A block starts sliding down from point L as shown. Assuming the frictional force is negligible, what is the speed of the block when it reaches point M, if it travels 4.0 m along the track?

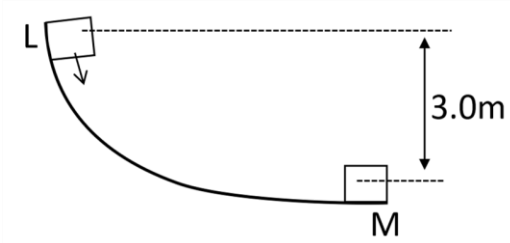
(Take g = 10 m/s^2)

a) 7.7 ms^{-1}

b) 8.5 ms^{-1}

c) 9.0 ms^{-1}

d) 12 ms^{-1}



30) Which among the following is a complex permanent tissue in plants?

a) Xylem b) Parenchyma

c) Sclerenchyma d) Collenchyma

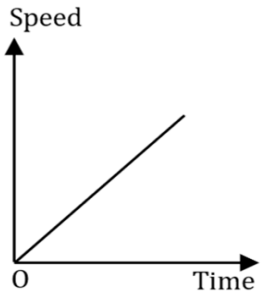
31) _____ regulates calcium and phosphate balance in the body.

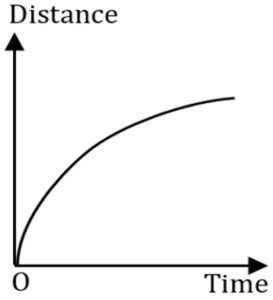
a) Adrenal gland b) Pancreas

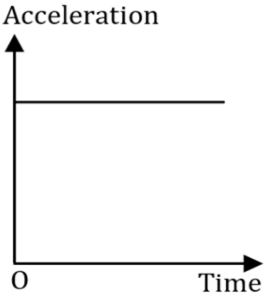
c) Parathyroid gland d) Pineal gland

32) A bus starts from rest and moves away from the point O with uniform acceleration as shown in the given figure. The graph obtained is _____.



a) 

b) 

c) 

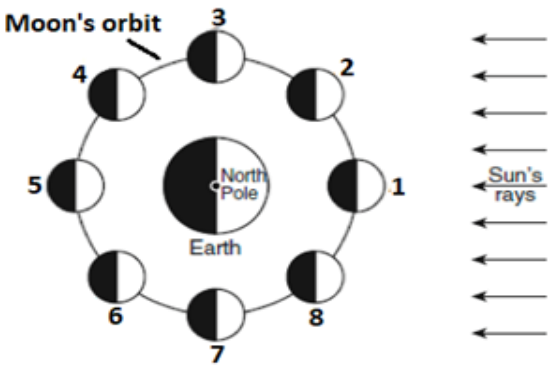
d) Both b) and c)

33) A boy standing at a certain distance from a wall produces a loud sound. He hears echo of the sound after 2.2 s. Velocity of sound in air is 340 ms^{-1}. Distance between the wall and the boy is

a) 340 m
b) 748 m
c) 374 m
d) 680 m

34) The given diagram shows the Moon orbiting the Earth as viewed from space above the North pole The Moon is shown at eight different positions in its orbit. At which of the following two respective positions of the Moon is an eclipse of the Sun and the Moon possible?

a) 1 and 5
b) 2 and 6
c) 3 and 7
d) 4 and 8

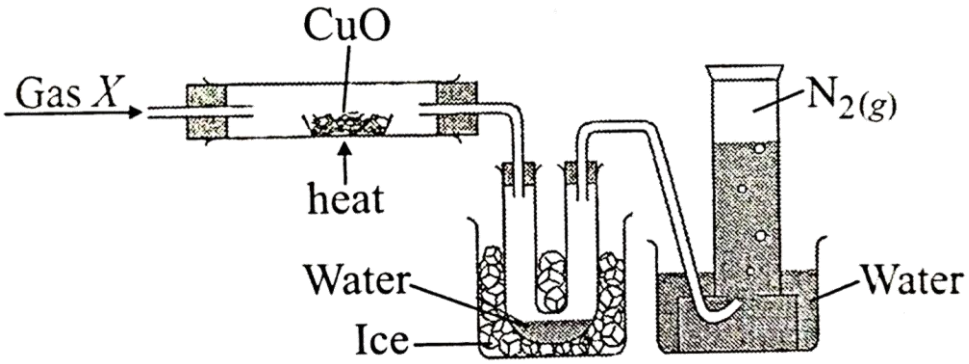


35) Which of the following statements is/are incorrect?

i) Plastics are used to store various chemicals as they are not corroded easily and are non-reactive.
ii) Polythene, a thermosetting plastic is used for manufacturing the floor tiles and kitchenware.
iii) Teflon is a special plastic which resists fire and can tolerate heat better than other plastics.
iv) Bakelite is used for making electrical switches as it is a poor conductor of electricity.

a) i) and iv) only
b) iii) only
c) ii) and iii) only
d) ii) and iv) only

36) The given figure shows set-up to study the reaction of gas X with copper(II) oxide:
Which of the following statements is/are correct?



i) 1 Mole of H_2O contains 2 moles of oxygen molecules and 1 mole of hydrogen molecules.
ii) Gas X is a compound containing nitrogen and hydrogen.
iii) The number of atoms present in 22.4 L of N_2 is 6.023×10^{23}
iv) The number of atoms present in 22.4 L of water vapours is 18.069 × 1023.

a) i) only
b) ii) and iv) only
c) iii) and iv) only
d) ii) and iii) only

37) Identify the given cell organelle and select the correct statement regarding its function

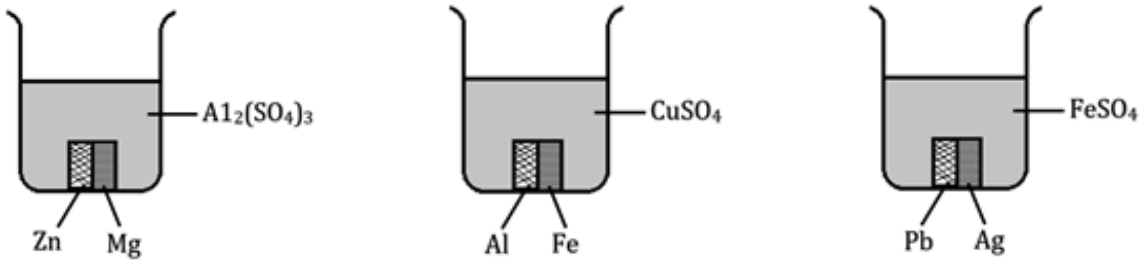


a) It is engaged in synthesis and transport of DNA.
b) It takes part in natural defence of the body
c) It is concerned with the synthesis of energy rich compound ATP
d) It packages materials synthesised in the cell and dispatches them either to intracellular or extracellular targets.

38) A particle moving along a straight line covers first one third distance with a speed of 3 ms^{-1}. The rest of the distance is covered in two equal time intervals with speed of 4.5 $ms^{-1}$and 7.5 ms^{-1}. The average speed of the particle is

a) 5.0 ms^{-1}
b) 5.5 ms^{-1}
c) 4.5 ms^{-1}
d) 4.0 ms^{-1}

39) Observe the given diagram carefully.



1 **2** **3**

Which of the following statements are correct?

i) Both the metal strips will dissolve in beaker 2.
ii) Colour of the solution will change in beaker 1.
iii) Reaction will take place in beaker 3 but there will be no colour change.
iv) Reaction will occur only in beakers 1 and 2.

a) ii) and iii) only
b) i) and ii) only
c) i) and iv) only
d) i), ii), iii) and iv)

40) Two satellites of masses m_1 and m_2 ($m_1 > m_2$) are revolving around the earth in circular orbits of radii r_1 and r_2 ($r_1 > r_2$) respectively. Which of the following is true regarding their respective speeds v_1 and v_2?

a) $V_1 = V_2$ b) $V_1 > V_2$

c) $V_1 < V_2$ d) Cannot be predicted

SECTION – C
ENGLISH

Read the text and answer the questions that follow.

In 1900, about a third of all cars on US roads were electric. Then gasoline models took over. But the focus has now returned to electric vehicles. By 2040, more than half of new cars worldwide will be battery-powered. Here is a look at the evolution of electric vehicles.

1800s: Inventors in several countries start experimenting with battery-powered vehicles. Robert Anderson in Britain is credited with developing the first electric carriage in 1832. In 1899, Belgian race car driver Camille Jenatzy drives faster than 100 km/h in the La Jamais Contente, an electric vehicle developed by him. An electric taxi is involved in the first recorded US motor-vehicle fatality in New York, on September 13, 1899.

1900s-1910s: Automakers market EV to women, spiffing them up with fancy upholstery, flower vases, clocks and even makeup kits. Companies tout them as quieter, cleaner and easier to operate than gasoline models. Henry Ford and Thomas Edison work on a "cheap and practicable" electric automobile that will "run for 100 miles". But they eventually abandon the project. Ferdinand Porsche develops his first car, the electric P1.

1920s-1960s: The popularity of EV declines because of demand for Ford's mass-produced Model T and other gasoline-fuelled vehicles. In 1959, National Union Electric Corp modifies 100 Renault Dauphines to run on batteries. The new versions are called Henney Kilowatts. Other companies start making concept models in response to growing concerns about air pollution.

1970s-1980s: Battery power gets a promotional boost in 1971 and 1972 as the world watches NASA's electric Lunar Roving Vehicle bounce around on the moon. Soaring gasoline prices later in the decade cause automakers and the US Department of Energy to explore alternative fuels, with GM developing a prototype urban electric car in 1973 and Sebring-Vanguard bringing out its CitiCar.

But limited range and performance issues hinder widespread acceptance.

1990s: Tightening emission rules cause auto firms to focus increasingly on alternative-fuel vehicles. In 1997, GM introduces the EV1, making more than 1,000 of the sleek two-seaters and leasing them to customers as a market study. The first mass-produced hybrids also go on sale — Toyota's Prius and Honda's Insight — and Nissan previews its Altra EV minivan, powered by lithium-ion batteries.

41) Which event is associated with the first recorded U.S. motor-vehicle fatality?

a) The test drive of Ford’s Model T

b) A crash involving an electric taxi in New York

c) The race of Camille Jenatzy’s La Jamais Contente

d) The failure of the Henney Kilowatt model

42) Which pair of inventors worked together on developing a 100-mile range electric car but eventually gave up the idea?
   a) Robert Anderson and Ferdinand Porsche b) Henry Ford and Thomas Edison
   c) Camille Jenatzy and Ferdinand Porsche d) Thomas Edison and Nikola Tesla

43) The NASA Lunar Roving Vehicle became a symbol of electric mobility because:
   a) It was the first EV used for long-distance racing
   b) It was the first EV to be sold commercially
   c) It proved that electric vehicles could work in space conditions
   d) It was powered entirely by solar panels

44) Choose a suitable title for the passage.
   a) Invention of Electric Car b) Evolution of Electric Car
   c) Introduction of Tesla d) Launch of EV1

45) What does the word 'spiffing' mean in the passage?
   a) Encouraging b) Intimidating
   c) Touring d) Demoralizing

WORD AND STRUCTURE KNOWLEDGE

Directions (for Q. 46) Identify the kinds of pronouns for the underlined words in the following sentences.

46) The politicians argued with <u>one another</u>.
   a) Reciprocal b) Relative
   c) Distributive d) Possessive

Directions (for Q. 47) Choose the correctly spelt word.

47) How do you spell the word that means 'holding firmly to an opinion'?
   a) Pertinaecious b) Pertineacious
   c) Pertinacious d) Perttinacious

Directions (for Q. 48) Choose the option which expresses the correct active/passive voice.

48) The secretary will write the minutes of meeting that is going to be held next Monday.
   a) The minutes of the meeting that is going to be held next Monday, will have been written by the secretary.
   b) The minutes of the meeting that is going to be held next Monday, will be written by the secretary.
   c) The minutes of the meeting that is going to be held next Monday, have been written by the secretary.
   d) The minutes of the meeting that is going to be held next Monday have been written by the secretary.

Directions (for Q. 49) Direct speech: The captain said to team, "Bravo! You have done excellently in the match."

49) Indirect speech: The captain applauded the team _____
   a) by commending that they have done excellently in the match
   b) saying that they had done excellently in the match
   c) by suggesting that they have done excellently in the match
   d) by telling that they had done excellently in the match

Directions (for Q. 50) Choose the part of the sentence that has an error

50) All the chief-ministers are responsible for the pitiable condition of their states.

a) All the chief-ministers
b) are responsible
c) for the pitiable condition
d) of their states.

Directions (for Q. 51 - 53) Choose the correct form of verb in the blank

51) Every time I asked for my feedback to be shared with me, my boss _____ and gave some excuse about his hectic schedule.

a) paltered
b) concurred
c) panged
d) maimed

52) The orientation and the induction were designed to_____ the new employees, _____ them with the knowledge needed to excel in their roles.

a) expedite, elegizing
b) streamlined, deploring
c) facilitate, bestowing
d) enable, extolling

53) According to _____Bible, it is_____ meek and _____ humble who will inherit _____ earth.

a) the, no article, no article, the
b) the, the, no article, no article
c) the, the, the, the
d) no article, the, the, no article

Directions (for Q. 54) Choose the most appropriate option to fill in the blank

54) She _____ with the project for days with no progress_____ it and soon realized that she was wedged _____

a) had toiled, to stand for, on the fence
b) was being toiled, to cast on, on the wrong foot
c) had been toiling, to show for, in a tough spot
d) toiled, to scrape at, in a rut

Directions (for Q. 55) Choose the correct antonym of the words given below

55) "Don't go home yet," I said to my teammate,
"remember you promised to finish your work before leaving." **Change into indirect speech**

a) I requested my teammate not to go home yet and to remember that he had promised to finish his work before leaving.
b) I requested my teammate to go home yet and to remember that he had promised to finish his work before leaving.
c) I requested my teammate not to go home and to remember he has promised to finish his work before leaving.
d) None of these

SECTION – D
APTITUDE

56) IF $'P \times Q'$ means 'P is brother of Q'
$'P - Q'$ means 'P is sister of Q',
$'P + Q'$ means 'P is father of Q',
` $P \div Q'$ means 'P is mother of Q',
then how is A related to D in $B + A \div C - D$?

a) Aunt
b) Niece
c) Mother
d) Can't be determined

57) BEGK is related to ADFJ in the same way as PSVY is related to _____ ?

a) LOQT b) ROUX

c) OTUZ d) ORUX

Direction (58 - 60): Seven flights namely Jet Airways, British Airways, Delta, Quantas, Emirates, Lufthansa, Air India are scheduled to fly to London. There is only one flight to London on each of the seven days of the week, starting from Monday and ending on Sunday.

Delta flies on Wednesday. Air India flies the day next to British Airways. British Airways does not fly on Monday or Friday. Two airlines fly between the days British Airways and Emirates fly. Emirates does not fly on Sunday. Quantas flies a day before Lufthansa.

58) On which of the following days does Jet Airways fly?

a) Friday b) Sunday

c) Tuesday d) Thursday

59) How many flights fly between Lufthansa and Delta?

a) Five b) One

c) Two d) Three

60) Which of the following flights flies on Friday?

a) Air India b) Quantas

c) Emirates d) Lufthansa

61) If Delta postpones its flight to Sunday owing to some technical reasons and all the flights scheduled for Thursday to Sunday are now made to take off a day ahead of the schedule, which of the following flights would now fly on Friday?

a) Lufthansa b) Jet Airways

c) British Airways d) Quantas

62) Farmer everyday goes to his farm from his home. He walks 400 m towards South. He turns to his left and walks 600 m. He then turns to his right and walks 200 m and reach his farm. How far is the farm from the home and in which direction?

a) $600\sqrt{2}$ m, North-East b) $600\sqrt{2}$ m, South-East

c) 800 m, North-East d) 800 m, South-East

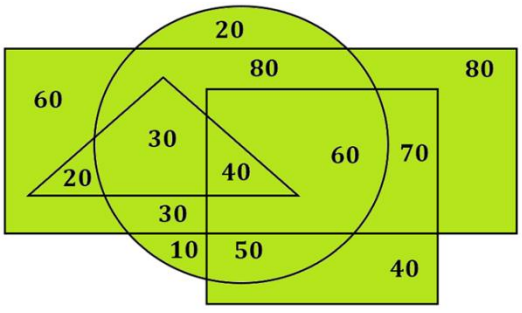
DIRECTION (63 - 64): The following questions are based on the diagram and information given below:

Triangle represents the married persons

Circle represents unemployed

Square represents men

Rectangle represents vegetarians



Answer the following questions:

63) How many persons are male vegetarians, who are employed and unmarried?

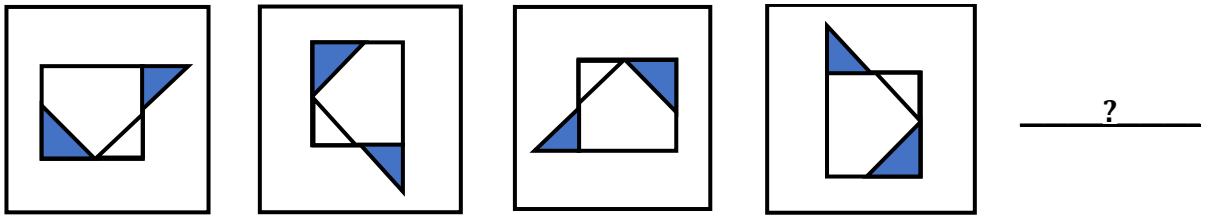
a) 70 b) 40

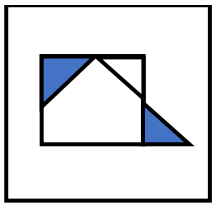
c) 120 d) 180

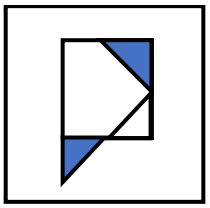
64) The number of married men, who are unemployed and vegetarians is

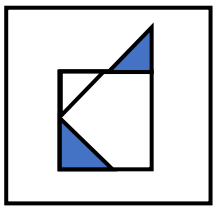
a) 10 b) 20

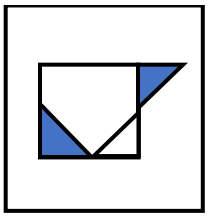
c) 30 d) 40

65) 

a) 

b) 

c) 

d) 

SECTION – E
GENERAL KNOWLEDGE

66) India reduced GST on a range of products in early September 2025 to mitigate the impact of steep U.S. tariffs. What was the tariff rate imposed by the Trump administration on Indian exports at that time?

a) 25% b) 35%

c) 50% d) 75%

67) Which country held parliamentary elections in early September 2025, with a centre-left bloc narrowly leading amid rising polarization?

a) Sweden b) Norway

c) Denmark d) Finland

68) NASA, the US space agency, recently created a new history to discover the carbon dioxide gas and hydrogen peroxide on the frozen surface of Charon, the largest moon of _____.

a) Neptune b) Pluto

c) Jupiter d) Saturn

69) Scientists at CSIR-Centre for Cellular and Molecular Biology (CCMB) have found out that an invasive species of _____ has spread to 60% of the water bodies in the Eastern Ghats using eDNA-based method.

a) Armoured sailfin Catfish b) Tilapia

c) Goldfish d) Common Carp

70) What is the name of the short-range ballistic missile recently launched by India?

a) Agni-1 b) Astra-1

c) Avni-1 d) Ajwa-1

71) Which Article in the Indian Constitution empowers the President to declare a national emergency in case of external aggression or armed rebellion?

a) Article 352 b) Article 356

c) Article 360 d) Article 370

72) Tanushree Pandey has clinched which medal at the World Soft Tennis Championship at Jingshan in China?

a) Gold
b) Silver
c) Bronze
d) None of these

73) Which city will host the Badminton World Championships in August 2026?

a) Mumbai
b) Hyderabad
c) Bengaluru
d) New Delhi

74) Which strategic partnership, involving Japan, India, and the US, focuses on enhancing security in the Indo-Pacific region and countering Chinese influence?

a) ASEAN
b) SAARC
c) Quad (Quadrilateral Security Dialogue)
d) G20

75) Which type of plate boundary occurs when two tectonic plates move away from each other, typically forming a new oceanic crust?

a) Convergent Boundary
b) Divergent Boundary
c) Transform Boundary
d) Subduction Zone