



# Campus KD Campus Pvt. Ltd

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009

24. (B)  $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, \frac{9}{32}, \frac{11}{64}, ?$

Here we have two series-

1<sup>st</sup> series:-  $1, 3, 5, 7, 9, 11, 13$   
 $\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$   
 $\quad \quad \quad +2 \quad +2 \quad +2 \quad +2 \quad +2 \quad +2$

2<sup>nd</sup> series:-  $2, 4, 8, 16, 32, 64, 128$   
 $\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$   
 $\quad \quad \quad \times 2 \quad \times 2 \quad \times 2 \quad \times 2 \quad \times 2 \quad \times 2$

So next term is  $\frac{13}{128}$ .

25. (D) As,  $\begin{matrix} T & E & A & C & H & E & R \\ +2 & +2 & +2 & +2 & +2 & +2 & +2 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ V & G & C & E & J & G & T \end{matrix}$

So,  $\begin{matrix} C & H & I & L & D & R & E & N \\ +2 & +2 & +2 & +2 & +2 & +2 & +2 & +2 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ E & J & K & N & F & T & G & P \end{matrix}$

26. (A) Here we can count 12 squares in the given figure.

27. (A)  $Z = 52 = 2 \times (26)$  actual position in english alphabet  
 $ACT = 2 \times (1 + 3 + 20)$  actual position in english alphabet  
 $= 2 \times 24 = 48$   
 $EAT = 2 \times (5 + 1 + 20)$  actual position in english alphabet  
 $= 2 \times 26 = 52$

28. (C)  $\begin{matrix} Q & P & N & K & A & Z & X & U \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +1 & +3 & +1 & +3 & +1 & +3 & +1 & +3 \end{matrix}$   
 $\begin{matrix} U & T & R & N & S & R & P & M \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +1 & +4 & +1 & +3 & +1 & +3 & +1 & +3 \end{matrix}$

29. (C)

3 days	2 days	1 day				day
before yest.	before yest.	before yest.	yest.	Today	Tmw.	after tmw.
Sun	Mon	Tues	Wed	Thur	Fri	Sat

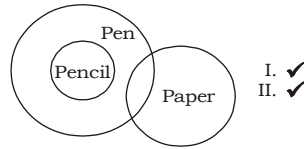
So, we can say that 3 days before yesterday was Sunday.

30. (D) Given:-  $(18 + 10 \times 20) - 8 \div 6$   
 After interchanging the sign we have,  
 $(18 \times 10 + 20) \div 8 - 6$   
 $= (180 + 20) \div 8 - 6$   
 $= 200 \div 8 - 6$   
 $= 25 - 6 = 19$

31. (D) Number of people who know all three subjects = 100  
 Number of people who know only civics = 170

$\therefore$  Required Ratio =  $\frac{100}{170} = \frac{10}{17}$

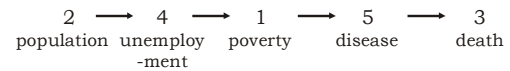
32. (D)



Both (I) & (II) follow.

33. (D) The word 'COMMUNICATE' can't be formed from the word 'RECOMMENDATION' as we can't find the word 'U' in RECOMMENDATION.

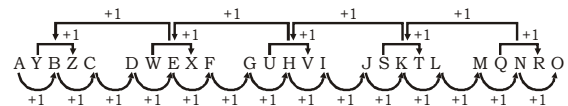
34. (C) The correct order is-



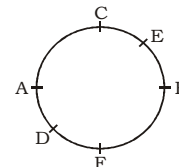
35. (C)  $125, 80, 45, 20, 5$   
 $\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$   
 $\quad \quad \quad -45 \quad -35 \quad -25 \quad -15$   
 $\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow$   
 $\quad \quad \quad +10 \quad +10 \quad +10$

36. (C)  $J 2 Z, K 4 X, L 7 V, M 11 T, N 16 R, O 22 P$   
 $\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$   
 $\quad \quad \quad +2 \quad +3 \quad +4 \quad +5 \quad +6$   
 $\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$   
 $\quad \quad \quad -2 \quad -2 \quad -2 \quad -2$   
 $\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$   
 $\quad \quad \quad +1 \quad +1 \quad +1 \quad +1$

37. (B)



38. (B)



Above mentioned is the position of six persons on a circular table as per given data.

We can clearly see that F is the person sitting to the left of B.

39. (D)  $\frac{25 \times 12}{5} = 60$

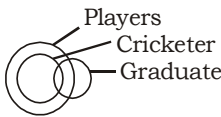
$\frac{18 \times 17}{2} = 153$

$\frac{36 \times 16}{?} = 96 \Rightarrow ? = \frac{36 \times 16}{96} = 6$

40. (D)  $\begin{matrix} \boxed{3} & \boxed{4} & \boxed{5} \\ \uparrow & \uparrow & \uparrow \\ x = \boxed{6} & \boxed{8} & \boxed{10} \\ \uparrow & \uparrow & \uparrow \\ \boxed{216} & \boxed{512} & \boxed{?} \end{matrix}$   
 $\times 2$   
 $x = 6, 8, 10$   
 $\Rightarrow x^3 = 216, 512, 1000$   
 So, ? = 1000

KD  
**Campus**  
**KD Campus Pvt. Ltd**

**2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009**

41. (A)  $16 = 9 + 4 + 3$   
 $36 = 25 + 6 + 5$   
 $64 = ? + 8 + 7$   
 $\Rightarrow ? = 64 - 15 = 49$
42. (C) a **a** b c **d**/a **b** b c d/a **b** c c d/a b c d **d**  
 So, we have **adbbad** as the right answer.
43. (B) We can observe from the given diagram that number 3 represents indian professors who are also lawyers.
44. (C) As,     S   T   O   P  
            ↓   ↓   ↓   ↓  
            19 20 15 16  $\Rightarrow$  19201516  
 So,     P   O   T   S  
            ↓   ↓   ↓   ↓  
            16 15 20 19  $\Rightarrow$  16152019
45. (C) Given equation:-  
 $8 \times 2 + 3 - 5 = 21$   
 let us change 'x' and '-' signs  
 then we have  
 $8 - 2 + 3 \times 5$   
 $= 8 - 2 + 15$   
 $= 23 - 2$   
 $= 21$   
 So, (C) is the right option.
46. (D) 
47. (D)  $5 = 3^2 - 2^2$   
 $21 = 5^2 - 2^2$   
 $20 = 6^2 - 4^2$   
 $x = 4^2 - 3^2$   
 $\Rightarrow 16 - 9 = 7$   
 $\Rightarrow x = 7$
48. (C)  
 49. (B)  
 50. (D)  
 51. (D) Ashok Dalwai committee was constituted by Union Govt. for doubling farmers' income by the year 2022. The committee was constituted to suggest measures for doubling farmers' income.  
 53. (B) Catalyst is a substance that increases the rate of a chemical reaction without undergoing any permanent chemical change in itself.  
 54. (C) In the Union Budget 2018-19, Finance Minister Arun Jaitley used the term 'Green Gold' to refer Bamboo. Also, Finance Minister announced to launch restructured National Bamboo Mission with an outlay of ₹ 1290 crore to promote bamboo sector in a holistic manner.  
 61. (B) The Rights of the Child was adopted by the General Assembly on 20<sup>th</sup> November 1959 and recognized in the Universal Declaration of Human Rights.
62. (B) A tough, semitransparent substance that is the main component of the exoskeletons of arthropods, such as the shells of crustaceans and the outer coverings of insects. Chitin is a carbohydrate and is found in the cell walls of certain fungi and algae.
63. (A) The Amaltas (botanical name is Cassia fistula), Indian Laburnum Tree is a very valuable medicinal tree and has been used in Ayurveda as a gentle laxative, which can be taken safely even by children and expectant mothers.
64. (A) Urease is an enzyme that catalyzes the hydrolysis of urea, forming ammonia and carbon dioxide. Found in large quantities in jack beans, soybeans and other plant seeds, it also occurs in some animal tissues and intestinal microorganisms. Urease is significant in the history of enzymology as the first enzyme to be purified and crystallized (by James B. Sumner in 1926). This achievement laid the groundwork for the subsequent demonstration that urease and other enzymes are proteins.
66. (C) Political sovereignty is sometimes called supreme will. It includes control of a specific state granted through a constitution or other enabling law and carried out through an established government.
67. (B) Index of Industrial Production (IIP) is a composite indicator that measures the short-term changes in the volume of production of a basket of industrial products during a given period with respect to that in a chosen base period.  
 It is compiled and published by the Central Statistical Organization (CSO), Ministry of Statistics and Programme Implementation.
68. (B) The Merino is an economically influential breed of sheep prized for its wool. Its wool was already very highly valued in the Middle Ages. Today, Merinos are regarded as having some of the finest and softest wool of any sheep.
70. (C) The High Yielding Variety Programme (HYVP) was launched in the Kharif of 1966-67 with an objective to attain self-sufficiency in food by 1970-71. The core philosophy of the programme was to increase the productivity of food grains by adopting latest varieties of inputs of crops. The Farmers were extended finance through a relaxed mechanism by the Reserve Bank of India through the Central Cooperative Banks. This programme in the 4th five year plan was a major breakthrough and a turning point in the history of agriculture

- development in India.
71. (D) Gastrin is a peptide hormone that stimulates secretion of gastric acid (HCl) by the parietal cells of the stomach and aids in gastric motility. It is released by G cells in the pyloric antrum of the stomach, duodenum and the pancreas.
72. (D) Domestic Systemically Important Banks (D-SIBs) means that banks that are too big to fail (collapse). Reserve Bank of India included three banks till date such as SBI, ICICI Bank and HDFC Bank.
73. (D) World No Tobacco Day (WNTD) is observed around the world every year on May 31. It is intended to encourage a 24-hour period of abstinence from all forms of tobacco consumption around the globe. The day is further intended to draw attention to the widespread prevalence of tobacco use and to negative health effects, which currently lead to nearly 6 million deaths each year worldwide, including 600,000 of which are the result of non-smokers being exposed to second-hand smoke.
76. (A) El Nino is a climate cycle in the Pacific Ocean with a global impact on weather patterns. The cycle begins when warm water in the western tropical Pacific Ocean shifts eastward along the equator toward the coast of South America.
78. (B) Pradhan Mantri Jeevan Jyoti Bima Yojana is Government of India backed life insurance scheme announced in the Union Budget 2015-16. Following are the features of this scheme-
- ✦ This scheme is available to people between 18 to 50 years of age.
  - ✦ It carries the annual premium of ₹ 330 (which is auto debited from the account)
  - ✦ It covers the insurance of ₹ 2 lakhs in case of death.
  - ✦ GST is exempted on this scheme.
80. (A) The Satavahanas (IAST: Satavahana), were an Indian dynasty based in the Deccan region. The beginning of the Satavahana rule is dated variously from 271 BCE to 30 BCE. Satavahanas dominated the Deccan region from 1st century BCE to 3rd century CE.
82. (B) A star topology is a topology for a Local Area Network (LAN) in which all nodes are individually connected to a central connection point, like a hub or a switch. A star takes more cable than e.g. a bus, but the benefit is that if a cable fails, only one node will be brought down.
84. (B) The Vernal equinox is also called Spring equinox. An equinox is an astronomical event in which the plane of Earth's equator passes through the center of the Sun which occurs twice each year that is around 20<sup>th</sup> March and 23<sup>rd</sup> September.
85. (A) The 38 elements in groups 3 through 12 of the periodic table are called "transition metals". As with all metals, the transition elements are both ductile and malleable, and it conduct electricity and heat.
86. (A) J. B. Dunlop invented pneumatic rubber tire in 1887.
87. (B) It is an international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology. Opened for signature in 1968, the Treaty entered into force in 1970. On 11<sup>th</sup> May 1995, the Treaty was extended indefinitely. A total of 191 states have joined the Treaty, though North Korea, which acceded to the NPT in 1985 but never came into compliance, announced its withdrawal in 2003. Four UN member states have never joined the NPT: India, Israel, Pakistan and South Sudan.
88. (B) BC 250 - AD 250: Mushikavamsa (also called Ezhimalai Kingdom, Puzhinadu or Konkanam) was an ancient kingdom of Sangam period in the present day northern Kerala. They ruled the strip of land between Mangalore in the north and Vadagara in the south. Ezhimalai is the capital of Mushikavamsa. Ezhimalai Konkanam Nannan was the most powerful ruler of Ezhimalai, he expanded the kingdom to Wayanad, Gudallore and to parts of Coimbatore.
89. (D) Masti Venkatesa Iyengar (6 June 1891 – 6 June 1986) was a well-known writer in Kannada language. He was the fourth among Kannada writers to be honoured with the Jnanpith Award,[1] the highest literary honour conferred in India.[2] He was popularly referred to as Masti Kannadada Aasti which means Maasti is Kannada's Treasure. He is most renowned for his short stories. He wrote under the pen name Srinivasa. He was honoured with the title Rajasevasakta by then Maharaja of Mysore Nalvadi Krishnaraja Wadeyar.
90. (D) pH-Potential of Hydrogen  
The concentration of hydrogen ions is commonly expressed in terms of the pH scale. It represents the ratio of Hydronium ions (H<sub>3</sub>O) to Hydroxide ions (OH). High pH corresponds to low hydrogen ion concentration and vice versa. pH varies in the range of 1 to 14. The solution closer to 1 is highly acidic, while the solution closer to 14 is the strong base. A neutral liquid (Pure

- water at 25°C) has pH of 7.
91. (A) The World Wide Web is the primary tool billions of people use to interact on the Internet. Web pages are primarily text documents formatted and annotated with Hypertext Markup Language (HTML).
94. (D) Venezuela Govt. launched cryptocurrency 'Petro' in december, 2017 to fight back the economic and political crises prevailing in the economy.
95. (A) Say's law, or the law of markets, found in classical economics, states that aggregate production necessarily creates an equal quantity of aggregate demand.
96. (C) The Ranjit Sagar Dam, also known as the Thein Dam, is part of a hydroelectric project constructed by the Government of Punjab on the Ravi River in the state of Punjab.
97. (C) Garampani Wildlife Sanctuary is a 6.05-square-kilometre (2.34 sq mi) wildlife sanctuary located in Karbi Anglong district, Assam which 25 km (16 mile) from Golaghat.
98. (B) Sri Lanka got the status of Test playing country in 1981, and beat India in the 1979 World Cup. Before this they were champion of ICC non-test playing countries.
100. (A) The reservation of 27% government jobs for other Backward Classes declared for the first time was in the year 1990 by the Vishwanath Pratap Singh government.

101. (C) Selling price =  $60 \times \frac{115}{100} \times \frac{120}{100} = ₹ 82.8$

102. (D) **Short trick:-**

Let the lengths of the trains be  $2x$  &  $x$  m  
Total distance = Relative speed  $\times$  time

$$= 90 \times \frac{5}{18} \times 12 = 300 \text{ m}$$

$x + 2x = 300$ ,  $x = 100$  and  $2x = 200$   
and it crosses the platform in 45 seconds,  
 $\therefore$  total distance covered in 45 seconds.

$$= 48 \times \frac{5}{18} \times 45 = 600 \text{ m}$$

length of platform =  $600 - 200$   
= 400 m

103. (A) Let the cost price of each goat = ₹ 100

C.P	→	100 <sub>x9</sub>	-20%	→	80 <sub>x9</sub>	}	same
IInd goat →	→	100 <sub>x5</sub>	+44%	→	144 <sub>x5</sub>		

$\therefore$  cost price of 1st goat

$$= \frac{900}{1400} \times 1008 = ₹ 648$$

104. (A) 1st speed =  $\frac{500}{4} = 125 \text{ km/h}$

2nd speed =  $\frac{450}{5} = 90 \text{ km/h}$

$\therefore$  Required % =  $\frac{35}{125} \times 100 = 28\%$

105. (D) Let the time taken by 3 men =  $x$  days  
time taken by 9 women =  $x + 5$  days  
 $3m = x$  day

$$2m = \frac{3x}{2} \text{ days}$$

Similarly,  $9w = x + 5$  days

$$3w = 3(x + 5) \text{ days}$$

ATQ,

$$\frac{2}{3x} + \frac{1}{3(x+5)} = \frac{1}{6} \Rightarrow \frac{2x+10+x}{3x(x+5)} = \frac{1}{6}$$

$$\Rightarrow 18x + 60 = 3x^2 + 15x \Rightarrow 3x^2 - 3x - 60 = 0$$

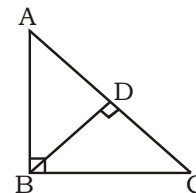
$$\Rightarrow x^2 - x - 20 = 0 \Rightarrow x = 5$$

Time taken by 1 man =  $3x = 3 \times 5 = 15$  days

Time taken by 1 women =  $9(x + 5) = 90$  days

Required output = 6 times

106. (B)



In  $\triangle ABC$  and  $\triangle BCD$

$\therefore \triangle ABC \sim \triangle BCD$  (by AA)

$$\Rightarrow BC^2 = AC \times CD$$

$$\Rightarrow \frac{AC}{BC} = \frac{AB}{BD} = \frac{BC}{CD}$$

$$\Rightarrow CD = \frac{BC^2}{AC}$$

107. (B) Let the given number be  $x$ .

Then,

$$\left(x \times \frac{3}{2}\right) - \left(x \div \frac{3}{2}\right) = 10$$

$$\Rightarrow \frac{3}{2}x - \frac{2}{3}x = 10$$

$$\Rightarrow \frac{9x - 4x}{6} = 10$$

$$\Rightarrow 5x = 60$$



108. (B)  $\Rightarrow x = 12$   
 SI = ₹ (7200 - 6000)  
 = ₹ 1200

$$\therefore SI = \frac{P \times R \times T}{100}$$

$$\Rightarrow 1200 = \frac{6000 \times R \times 4}{100}$$

$$\Rightarrow R = \frac{1200 \times 100}{6000 \times 4} = 5\%$$

New rate of R =  $5 \times 1.5 = 7.5\%$

$$\text{Then, SI} = \frac{6000 \times 7.5 \times 5}{100} = ₹ 2250$$

$$\therefore \text{Amount} = ₹ (6000 + 2250) = ₹ 8250$$

109. (C) The LCM of 12, 18, 21, 30

2	12, 18, 21, 30
3	6, 9, 21, 15
	2, 3, 7, 5

$$\therefore \text{LCM} = 2 \times 3 \times 2 \times 3 \times 7 \times 5 = 1260$$

$\therefore$  The required number

$$= \frac{1260}{2} = 630$$

110. (C) Let the principal be  $x$

$$\therefore \text{Principal SI} = \frac{7x}{4}$$

$$\therefore \text{SI} = \frac{7x}{4} - x = \frac{3x}{4}$$

$$\text{Rate} = \frac{\text{SI} \times 100}{\text{Principal} \times \text{Time}} = \frac{3x \times 100}{4 \times x \times 4} = 18\frac{3}{4}\%$$

111. (D) Average of 9 consecutive no. =  $n$

$$\therefore \text{Fifth number} = n$$

$$\text{Tenth number} = n + 5$$

$$\text{Eleventh number} = n + 6$$

New average

$$= \frac{9n + n + 5 + n + 6}{11}$$

$$= \frac{11n + 11}{11} = \frac{(n+1) \times 11}{11} = n + 1$$

112. (B) Let the initial quantity = 100

Initial quantity	:	New quantity
100	$\xrightarrow{-12\%}$	88
↓		↓ $\times 7.5$
Initial price	$\xrightarrow{+20\%}$	660
550		

$$\therefore \text{Initial price} = \frac{660}{120} \times 100 = 550$$

$$\text{Per article price} = \frac{550}{100} = ₹ 5.50$$

113. (C) Pipe A can fill a tank = 20 minutes

Let the efficiency of pipe A = 100

Then the efficiency of 5 new pipes

$$= 100 \times \frac{20}{100} \times 5 = 100$$

$$M_1 D_1 = M_2 D_2$$

$$20 \times 100 = 100 \times D_2$$

$$D_2 = 20 \text{ min}$$

114. (A) Let the numbers be  $a$  and  $b$ .

According to the question,

$$ab = 120 \quad \dots(i)$$

$$\text{and } a^2 + b^2 = 289 \quad \dots(ii)$$

$$\therefore (a + b)^2 = a^2 + b^2 + 2ab$$

$$= 289 + 2 \times 120$$

$$= 289 + 240 = 529$$

$$\therefore a + b = \sqrt{529} = 23$$

115. (A)  $A + B + C \rightarrow 8$   $\rightarrow 15$

$$A + B \rightarrow 12 \quad \rightarrow 120 \rightarrow 10$$

$$B + C \rightarrow \frac{40}{3} \quad \rightarrow 9$$

Effi. of A = 6, B = 4, C = 5

$$\text{share of A} = \frac{6}{15} \times 6750 = ₹ 2700$$

$$\text{share of B} = \frac{4}{15} \times 6750 = ₹ 1800$$

$$\text{share of C} = \frac{5}{15} \times 6750 = ₹ 2250$$

116. (C) Let the number be  $x$ .

Then,

$$x^2 = (75.15)^2 - (60.12)^2$$

$$= (75.15 + 60.12)(75.15 - 60.12)$$

$$= 135.27 \times 15.03$$

$$= 2033.1081$$

$$\Rightarrow x = \sqrt{2033.1081}$$

$$= 45.09$$

117. (C)

Dog	:	Cat
Leap/min	5	4

Distance/leap	8 m	:	5 m
Speed-	40 m/min	:	20 m/min

$$\text{Relative speed} = 20 \text{ m/min}$$

$$\text{Actual distance b/w cat \& dog} = 50 \times 8 = 400 \text{ m}$$

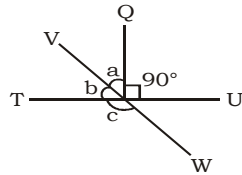
$$\text{time taken by dog} = \frac{400}{20} = 20 \text{ min}$$

Distance travelled by dog =  $20 \times 40 = 800$  m

118. (C) After 10% discount  
Price of watch = 648

$$\therefore \text{2nd discount} = \frac{648 - 550.8}{648} \times 100 = 15\%$$

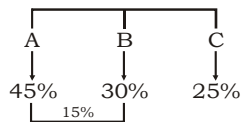
119. (D)



$$\begin{aligned} \angle a &= 36^\circ \\ \angle b &= 54^\circ \\ \therefore \text{value of } \angle c &= 180^\circ - \angle 54 \\ \angle c &= 126^\circ \end{aligned}$$

120. (B) Teacher's age  
=  $16 \times 10 - 19 \times 4 - 5 \times 10$   
=  $160 - 76 - 50 = 34$  years

121. (B)



$$\begin{aligned} \therefore B \text{ got } &100 - (45 + 25) = 30\% \\ \text{ATQ,} & \\ 15\% &\rightarrow 4500 \\ \therefore \text{Total voters} &\rightarrow 30000 \end{aligned}$$

122. (C) Let the numbers be  $x$ ,  $y$  and  $z$ .

Then,  
 $x : y = 2 : 3$   
 $y : z = 5 : 8$   
 $\therefore x : y : z = 2 \times 5 : 3 \times 5 : 3 \times 8$   
=  $10 : 15 : 24$   
Sum of the ratios  
=  $10 + 15 + 24 = 49$   
 $\therefore$  The second number

$$= \frac{15}{49} \times 98 = 30$$

123. (C) Akansha scored 25% = Failed by 60 marks

Vertika scores 50% = Passed by 50 more marks

$$\begin{aligned} \therefore \text{It's clear that } 25\% &= 100 \text{ marks} \\ 100\% &= 400 \text{ marks} \\ \text{Pass marks} &= 160 \end{aligned}$$

$$\text{Required \%} = \frac{400 - 160}{160} \times 100 = 150\%$$

124. (A) In 400 gm of alloy.

$$\text{Zinc} = \frac{5}{8} \times 400 = 250 \text{ gm}$$

$$\text{Copper} = \frac{3}{8} \times 400 = 150 \text{ gm}$$

If  $x$  gm of copper be mixed, then

$$\frac{250}{150 + x} = \frac{5}{4}$$

$$\Rightarrow 750 + 5x = 1000$$

$$\Rightarrow 5x = 1000 - 750 = 250$$

$$\Rightarrow x = 50 \text{ gm}$$

125. (A) C.S.A of cone =  $\pi rl$

$$\therefore \frac{22}{7} \times 16 \times l = \frac{2992}{7}$$

$$= 22 \times 16 \times l = 2992$$

$$= l = \frac{2992}{22 \times 16}$$

$$= 8.5 \text{ m}$$

126. (B) Given  $5N = 15R$

$$N : R = 3 : 1$$

$$\& 10R = 20K$$

$$R : K = 2 : 1$$

$$N : R : K$$

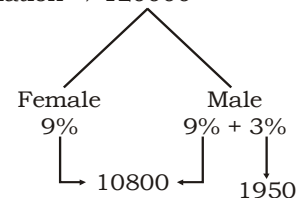
$$3 : 1_{\times 2}$$

$$2 : 1$$

$$\frac{6 : 2 : 1}{\downarrow \times 2000 \quad \downarrow \times 2000}$$

Nitya's income 12000

127. (D) Total population  $\rightarrow 120000$



Total population of male = 65000

$$\therefore \text{No. of females} = 67750$$

$$\therefore \text{Requird Diff.} = 2750$$

128. (C)  $AB \parallel CD \parallel PQ$  (Given)

Let  $AB = a$ ,  $PQ = b$ ,  $CD = c$

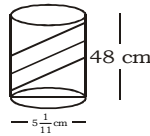
$$\therefore \frac{1}{b} = \frac{1}{a} + \frac{1}{c}$$

$$\Rightarrow \frac{1}{b} = \frac{1}{12} + \frac{1}{18}$$

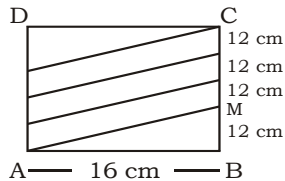
$$\Rightarrow \frac{1}{b} = \frac{3+2}{36}$$

$$\Rightarrow \frac{1}{b} = \frac{5}{36} \Rightarrow b = \frac{36}{5} \text{ cm}$$

129. (A)



when we open it



the base circumference

$$= 2\pi r = 2 \times \frac{22}{7} \times \frac{56}{11} \times \frac{1}{2} = 16 \text{ cm}$$

$\therefore$  AM = length of one complete turn

$$= \sqrt{16^2 + 12^2}$$

$$= 20 \text{ cm}$$

$$\therefore \text{total length} = 4 \times 20 = 80 \text{ cm}$$

130. (C)  $5 \tan \theta = 4$

$$\tan \theta = \frac{4}{5}$$

$$\therefore \frac{5 \sin \theta - 3 \cos \theta}{5 \sin \theta + 3 \cos \theta} = \frac{5 \sin \theta - 3 \cos \theta}{\frac{\cos \theta}{\frac{5 \sin \theta + 3 \cos \theta}{\cos \theta}}}$$

$$= \frac{5 \tan \theta - 3}{5 \tan \theta + 3} = \frac{5 \times \frac{4}{5} - 3}{5 \times \frac{4}{5} + 3}$$

$$= \frac{4 - 3}{4 + 3} = \frac{1}{7}$$

131. (D) Given  $\frac{P^2 - 4P + 4}{4P} = 8$

$$= \frac{P^2 - 4P + 4}{P} = 32$$

$$= \frac{P^2}{P} - \frac{4P}{P} + \frac{4}{P} = 32$$

$$\Rightarrow P - 4 + \frac{4}{P} = 32$$

$$= P + \frac{4}{P} = 36$$

132. (B)  $\cos^2 \alpha + \cos^2 \beta = 2$

$$= 1 - \sin^2 \alpha + 1 - \sin^2 \beta = 2$$

$$= \sin^2 \alpha + \sin^2 \beta = 0$$

$$= \sin \alpha = \sin \beta = 0$$

$$= \alpha = \beta = 0$$

$$\therefore \tan^3 \alpha + \sin^5 \beta = 0$$

133. (A) Let the length of pipe be  $h$  cm, then its

$$\text{volume} = \pi r_1^2 h - \pi r_2^2 h$$

$$= \pi h (r_1^2 - r_2^2) = \pi h (25^2 - 24^2)$$

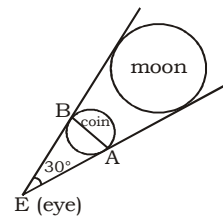
$$= 49\pi h \text{ cu. cm.}$$

$$\therefore \pi r^2 h = 49\pi h$$

$$\therefore r^2 = 49$$

$$\therefore \text{Diameter} = 14 \text{ cm}$$

134. (B)



$$\theta = 30^\circ = \left(\frac{30}{60}\right)^\circ$$

$$= \left(\frac{1}{2}\right)^\circ$$

$$= \left(\frac{1}{2} \times \frac{\pi}{180}\right)^c = \left(\frac{\pi}{360}\right)^c$$

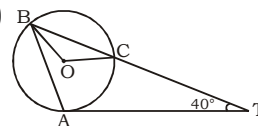
$$\theta = \frac{\text{Arc}}{\text{radius}} = \frac{\pi}{360} = \frac{4.4}{r}$$

$$\Rightarrow r = \frac{4.4 \times 360}{\pi} \text{ cm}$$

$$= \frac{4.4 \times 360}{22} \times 7$$

$$r = 504 \text{ cm}$$

135. (A)



$$\angle \text{CAT} = 44^\circ$$

$$\angle \text{BTA} = 40^\circ$$

$$\angle \text{ACT} = 180^\circ - 44^\circ - 40^\circ = 96^\circ$$

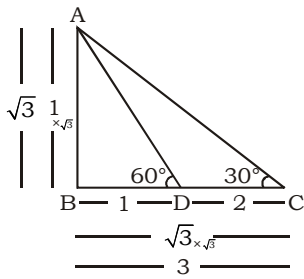
$$\angle \text{CAT} = \angle \text{CBA} = 44^\circ$$

$$\angle \text{BCA} = 180^\circ - 84^\circ - 44^\circ = 52^\circ$$

$$\therefore \text{Angle on Arc} = \text{BC} = 2 \times 52^\circ = 104^\circ$$

136. (A) **Short-trick:-**



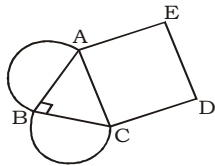


$$\therefore AB = \sqrt{3} = 30 \text{ given}$$

$$\therefore CD = \frac{30}{\sqrt{3}} \times 2$$

$$= 20\sqrt{3}$$

137. (B)



Let  $AB = BC = x$

then  $AC = \sqrt{2}x$

But  $AC = \sqrt{128} = 8\sqrt{2} \text{ cm}$

$$\sqrt{2}x = 8\sqrt{2}$$

$$\Rightarrow x = 8 \text{ cm}$$

Areas of semicircles

$$= \frac{1}{2}\pi \left(\frac{x}{2}\right)^2 + \frac{1}{2}\pi \left(\frac{x}{2}\right)^2$$

$$= \frac{1}{2}\pi (2 \times 16)$$

$$= 16\pi \text{ cm}^2$$

138. (A)  $\therefore x = \frac{1}{y}$

$$\therefore x + \frac{1}{x} = 4$$

ATQ,

$$\frac{x^2 + y^2}{x^3 + y^3} = \frac{x^2 + \frac{1}{x^2}}{x^3 + \frac{1}{x^3}} = \frac{14}{52} = \frac{7}{26}$$

139. (C)  $\frac{BE}{AB} = \sin 30^\circ = \frac{1}{2}$

$$\Rightarrow BE = \frac{1}{2} \times AB = 6 \text{ cm} = CF$$

$$\text{and } \frac{CF}{DF} = \tan 45^\circ = 1$$

$$\therefore DF = CF = 6 \text{ cm}$$

$$\therefore AE = \sqrt{12^2 - 6^2} = 6\sqrt{3} \text{ cm}$$

$$AD = 6 + 6 + 6\sqrt{3} = 6(2 + \sqrt{3})$$

Area of trapezium ADCB

$$= \frac{1}{2} \times (AD + BC) \times BE$$

$$= \frac{1}{2} \times [6(2 + \sqrt{3}) + 6] \times 6$$

$$= 3(2 + \sqrt{3} + 1) \times 6 = 18(3 + \sqrt{3}) \text{ cm}^2$$

140. (B) Let  $a = b = c = 2$ , then  $2s = 6$

$$s = 3$$

$$\therefore (s-a)^3 + (s-b)^3 + 3(s-a)(s-b)c$$

$$= (3-2)^3 + (3-2)^3 + 3(3-2)(3-2) \times 2$$

$$= 1 + 1 + 3 \times 2 = 8$$

$$= c^3$$

141. (D)  $\sin 2x = \frac{1}{5} = 1 + \sin 2x = 1 + \frac{1}{5} = \frac{6}{5}$

$$\therefore \sin^2 x + \cos^2 x + 2 \sin x \cdot \cos x = \frac{6}{5}$$

$$= (\sin x + \cos x)^2 = \frac{6}{5}$$

$$= \sin x + \cos x = \sqrt{\frac{6}{5}}$$

142. (D)  $\therefore x^3 + y^3 + z^3 - 3xyz$

$$= (x+y+z)(x^2 + y^2 + z^2 - xy - yz - zx) \dots (i)$$

$$\& (x+y+z)^2 = x^2 + y^2 + z^2 + 2(xy + yz + zx)$$

$$\Rightarrow (10)^2 = 30 + 2(xy + yz + zx)$$

$$\Rightarrow 2(xy + yz + zx)$$

$$= 100 - 30 = 70$$

From (i)

$$x^3 + y^3 + z^3 - 3xyz = 10(30 - 35)$$

$$= -50$$

143. (C) Formula:-

$$(B)^3 + 3(B)^2 - (B)^1 + (B)^2$$

$$= B \text{ denotes base} = 2$$

$$= (2)^3 + 3(2)^2 - (2)^1 + (2)^2$$

$$= 8 + 12 - 2 + 4$$

$$= 22 + 26 \text{ given in question}$$

$$= 48$$

144. (A)  $\sqrt{8} + 2\sqrt{32} - 3\sqrt{128} + 4\sqrt{50}$

$$= 2\sqrt{2} + 8\sqrt{2} - 3 \times 8\sqrt{2} + 4 \times 5\sqrt{2}$$

$$= 2\sqrt{2} + 8\sqrt{2} - 24\sqrt{2} + 20\sqrt{2}$$

$$= (2 + 8 - 24 + 20)\sqrt{2}$$

$$= 6\sqrt{2} = 6 \times 1.414 = 8.484$$

145. (D) Assume  $\theta = 45^\circ$

$$\text{then } 4m = 1 \times \left(1 + \frac{1}{\sqrt{2}}\right)$$

$$m = \frac{\sqrt{2}+1}{4\sqrt{2}} \text{ and } n = \frac{\sqrt{2}-1}{4\sqrt{2}}$$

$$\therefore m^2 - n^2 = \frac{1}{32} [(\sqrt{2} + 1)^2 - (\sqrt{2} - 1)^2]$$

$$= \left[\frac{1}{32}(4\sqrt{2})\right] = (m^2 - n^2) = \frac{1}{32}$$

from options-

$$mn = \frac{\sqrt{2}+1}{4\sqrt{2}} \cdot \frac{\sqrt{2}-1}{4\sqrt{2}} = \frac{1}{32}$$

$$\therefore (m^2 - n^2) = mn$$

146. (A) Percentage of money spent on Tennis

$$= \left(\frac{45}{360} \times 100\right)\% = 12\frac{1}{2}\%$$

147. (D) Let the total spendings on sports be ₹ x. Then,

$$\text{Amount spent on Golf} = ₹ \left(\frac{36}{360} \times x\right) = ₹ \frac{x}{10}$$

$$\text{Amount spent on Hockey} = ₹ \left(\frac{63}{360} \times x\right)$$

$$= ₹ \frac{7}{40}x$$

$$\text{Difference} = ₹ \left(\frac{7}{40}x - \frac{x}{10}\right) = ₹ \frac{3x}{40}$$

∴ Required Percentage

$$= \left[\left(\frac{3x/40}{x/10}\right) \times 100\right]\% = 75\%$$

148. (C) Let the total spendings on sports be ₹ x. Then,

$$\text{Amount spent on Cricket} = ₹ \left(\frac{81}{360} \times x\right)$$

$$= ₹ \left(\frac{9}{40}x\right)$$

$$\text{Amount spent on Football} = ₹ \left(\frac{54}{360} \times x\right)$$

$$= ₹ \left(\frac{3}{20}x\right)$$

$$\text{Difference} = ₹ \left(\frac{9}{40}x - \frac{3}{20}x\right) = ₹ \frac{3}{40}x$$

∴ Required percentage

$$= \left[\left(\frac{3x/40}{9x/40}\right) \times 100\right]\% = 33\frac{1}{3}\%$$

149. (B) Amount spent on Cricket and Hockey together

$$= ₹ \left[\frac{(81+63)}{360} \times 2\right] \text{ crores} = ₹ 0.8 \text{ crores}$$

$$= ₹ 80,00,000$$

150. (A) Amount spent on Basketball exceeds that on Tennis by:

$$= ₹ \left[\frac{(50-45)}{360} \times 18000000\right] = ₹ 2,50,000$$

151. (B) The negative form of simple past tense takes  $V_1$  in it. Hence, replace 'told' by 'tell'.

152. (B) As the sentence is in past form, replace 'is' by 'was'.

153. (C) If the two subjects are joined by 'neither ... nor', the verb agrees with the nearest subject. Hence, replace 'is' by 'are'.

154. (C) The past form of 'cost' is always the same.

155. (B) Phrase 'look forward to' takes ' $V_1 + \text{ing}$ ' after it. Hence, replace 'play' by 'playing'.

174. (C) Though SSC had given option (C) as the answer, it means the same. No improvement is hence the answer.

175. (A) When 'used to' is preceded by a verb, it means 'habitual of'. Here 'used to' is followed by ' $V_1 + \text{ing}$ '.

176. (C) 'Everybody' is singular and will take singular verb 'depends'.

177. (C) 'Not only ..... but also' is a correlative.

178. (C) 'Unique' is not used in a comparative or superlative degree.

179. (C) Here affection for son has been expressed

**MEANINGS IN ALPHABETICAL ORDER**

<b>Word</b>	<b>Meaning in English</b>	<b>Meaning in Hindi</b>
Avouch	affirm or assert	दृढ़तापूर्वक कहना
Cataclysm	a sudden disaster or a violent event that causes change	प्रलय
Catacombs	a series of underground tunnels used for burying dead people, especially in ancient times	कब्रों का तहखाना
Catechism	a set of questions and answers that are used for teaching people about the beliefs of a religion	धार्मिक प्रश्नोत्तरी
Charlatan	a person who claims to have knowledge or skills that they do not really have	ढोंगी, कपटी व्यक्ति
Compere	a person who introduces the people who perform in a television programme, a show in a theatre, etc.	सूत्रधार
Condemned	to express very strong disapproval of somebody/something, usually for moral reasons	निंदा
Convicted	declare (someone) to be guilty of a criminal offense by law	अपराधी
Crave	to have a very strong desire for something	इच्छा करना
Fastidious	not liking things to be dirty or untidy	नकचढ़ा, तुनक मिजाज
Filial	connected with the way children behave towards their parents	पुत्र/पुत्री-संबंधी
Frontier	a line or border separating two countries	सीमा-प्रदेश
Futility	the fact of having no purpose because there is no chance of success	व्यर्थता, निरर्थकता
Glorify	to make something seem better or more important than it really is	गौरवान्वित करना
Holocaust	an act of mass destruction and loss of life (especially in war or by fire)	विध्वंस
Impeccable	without mistakes or faults	त्रुटिहीन
Invasion	the act of an army entering another country by force in order to take control of it	आक्रमण
Judicial	connected with a court, a judge or legal judgement	न्यायिक
Judicious	careful and sensible; showing good judgement	विवेकपूर्ण
Libertine	a person, especially a man, who behaves without moral principles or a sense of responsibility, especially in sexual matters	व्यभिचारी, अनैतिक
Obligation	something which you must do because you have promised, because of a law, etc.	कर्तव्य
Pangs	sudden strong feelings of physical or emotional pain	कष्ट, यातना
Pedagogue	someone who educates young people	शिक्षक
Pitcher	an open vessel with a handle and a spout for pouring.	पात्र, बर्तन
Plagiarist	someone who uses another person's words or ideas as if they were his own	साहित्य की चोरी करने वाला
Prejudice	Preconceived opinion that is not based on reason or actual experience	पक्षपात
Sanity	the state of being sensible and reasonable	विवेक
Seek (v <sub>3</sub> - sought)	attempt to find (something)	खोजना
Sterile	not producing any useful result	निष्फल
Stringency	the fact of conditions being difficult and very strictly controlled because there is not much money	आर्थिक तंगी
Sycophant	a person who tries to please someone in order to gain a personal advantage	चापलूस
Synagogue	a building where jews meet for religious worship and teaching	यहूदी उपासनागृह
Vital	absolutely necessary or important	महत्वपूर्ण

## SSC CPO MOCK TEST - 3 (ANSWER KEY)

1. (C)	26. (A)	51. (D)	76. (A)	101. (C)	126. (B)	151. (B)	176. (C)
2. (B)	27. (A)	52. (B)	77. (A)	102. (D)	127. (D)	152. (B)	177. (C)
3. (C)	28. (C)	53. (B)	78. (B)	103. (A)	128. (C)	153. (C)	178. (C)
4. (A)	29. (C)	54. (C)	79. (C)	104. (A)	129. (A)	154. (C)	179. (C)
5. (C)	30. (D)	55. (D)	80. (A)	105. (D)	130. (C)	155. (B)	180. (A)
6. (C)	31. (D)	56. (C)	81. (C)	106. (B)	131. (D)	156. (B)	181. (D)
7. (D)	32. (D)	57. (A)	82. (B)	107. (B)	132. (B)	157. (C)	182. (B)
8. (C)	33. (D)	58. (D)	83. (A)	108. (B)	133. (A)	158. (D)	183. (C)
9. (C)	34. (C)	59. (B)	84. (B)	109. (C)	134. (B)	159. (A)	184. (B)
10. (D)	35. (C)	60. (A)	85. (A)	110. (C)	135. (A)	160. (D)	185. (A)
11. (D)	36. (C)	61. (B)	86. (A)	111. (D)	136. (A)	161. (A)	186. (C)
12. (D)	37. (B)	62. (B)	87. (B)	112. (B)	137. (B)	162. (D)	187. (A)
13. (A)	38. (B)	63. (A)	88. (B)	113. (C)	138. (A)	163. (B)	188. (B)
14. (D)	39. (D)	64. (A)	89. (D)	114. (A)	139. (C)	164. (B)	189. (D)
15. (C)	40. (D)	65. (A)	90. (D)	115. (A)	140. (B)	165. (C)	190. (B)
16. (C)	41. (A)	66. (C)	91. (A)	116. (C)	141. (D)	166. (A)	191. (A)
17. (B)	42. (C)	67. (B)	92. (C)	117. (C)	142. (D)	167. (A)	192. (C)
18. (B)	43. (B)	68. (B)	93. (B)	118. (C)	143. (C)	168. (A)	193. (C)
19. (C)	44. (C)	69. (A)	94. (D)	119. (D)	144. (A)	169. (C)	194. (B)
20. (B)	45. (C)	70. (C)	95. (A)	120. (B)	145. (D)	170. (B)	195. (B)
21. (D)	46. (D)	71. (D)	96. (C)	121. (B)	146. (A)	171. (B)	196. (C)
22. (C)	47. (D)	72. (D)	97. (C)	122. (C)	147. (D)	172. (D)	197. (D)
23. (B)	48. (C)	73. (D)	98. (B)	123. (C)	148. (C)	173. (C)	198. (C)
24. (B)	49. (B)	74. (A)	99. (A)	124. (A)	149. (B)	174. (C)	199. (D)
25. (D)	50. (D)	75. (D)	100. (A)	125. (A)	150. (A)	175. (D)	200. (D)

**For all general competitive exams**

