

K D Campus Pvt. Ltd

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

SSC MOCK TEST - 88 (SOLUTION)

- 1. (C) A.R.Rahman is a Musician and Shakuntala devi is a **Mathematician**
- 2. (B) $324 \Rightarrow 3^2 \times 4 = 36$ $623 \Rightarrow 6^2 \times 3 = 108$
- 4. (A) GOD = $7 \times 15 \times 4 = 420$ DOG = $4 \times 15 \times 7 = 420$
- 5. (D) $1+8+3-2=10 \Rightarrow 10^2=100$ $6+5+3-1=13 \Rightarrow 13^2=169$ $3+2+7-3=9 \Rightarrow 9^2=81$

 $7+8+9-2=22 \Rightarrow 22^2=484 \neq 529$

- 6. (C) Except 'F', others have same mirror image.
- 7. (C) Except **Samudragupta**, other belongs to Maurya dynasty.
- 8. (C) Except **856**, others are divisible by 9..
- 9. (A) Only son of Reena's father-in-law (Rahul) → Reena's husband.

So, Amit is Reena's husband. Also Indu and Meera are her daughters.

Thus, Rahul is the **Grandfather** of Meera.

10. (D) From (ii) and (iii) we have

Sign on front face	×	•	\triangleright
Sign on opposite face	×	0	\rightarrow

Here, \triangleright is opposite to \rightarrow .

11. (A)
$$\frac{6}{3} \times 18 = 36$$
, $\frac{8}{2} \times 12 = 48$, $\frac{12}{3} \times 2 = 8$

12. (A)
$$56 = 24 + 32 = 18 + 24 + 14 = 19 + 16 + 9 + 12$$

13. (B)
$$\frac{20 \times 18 \times 50}{100} = 180$$

$$\frac{80 \times 20 \times 40}{100} = 640$$

$$\frac{60 \times 24 \times 25}{100} = 360$$

14. (B)

15. (D)
$$2 \rightarrow 4 \rightarrow 3 \rightarrow 1 \rightarrow 5$$

16. (C)
$$4 \times 0.5 + 4 = 6$$

 $6 \times 1 + 3 = 9$
 $9 \times 2 + 2 = 20$
 $20 \times 4 + 1 = 81$

- 17. (B) $\begin{array}{c} 12 & 3 & 1.5 & 1.5 & 3 & 12 & 96 \\ \times 0.25 & \times 0.5 & \times 1 & \times 2 & \times 2 & \times 2 & \times 2 \\ \times 2 & \times 2 \end{array}$
- 18. (A) A is the daughter of B means A is the sister of the son (say D) of B i.e. $\mathbf{A}/\mathbf{D} \times \mathbf{B}$.

19. (B)

20. (A) acbd/cbda/bdac/dacb

21. (A)
$$36 - 12 \times 2 + 18 \div 9$$

= $36 - 12 \times 2 + 2$
= $36 - 24 + 2$
= **14**

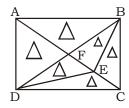
22. (C) From (i) and (iii)

Common word is 'Neenu' which means 'Hum'

From (ii) and (iii)

Common word is 'Ante' which means 'be' So, **Amla** means Ghost..

23. (D) The figure may be labeled as shown.



Simplest triangles are AFB, FEB, EBC, DEC, DFE and AFD i.e. 6 in number.

Triangles composed of two components each are AEB, FBC, DFC, ADE, DBE and ABD i.e. 6 in number.

Triangles composed of three components each are ADC and ABC i.e. 2 in number. There is only one triangle i.e. DBC which is composed of four components.

6 separate triangles has been shown.

Thus, there are 6 + 6 + 2 + 1 + 6 = 21 triangles in the figure.

24. (B) Each row contains 36 plants

There are 35 gaps between the two corner trees i.e. $(35 \times 3 = 105)$ meters and 4 metre is left on each side.

:. Length of the garden = $105+4\times2 = 113 \text{ m}$.

25. (C)
$$1 \times 3 \times 1 = 3 \Rightarrow 3^3 - 3^2 = 27 - 9 = 18$$

$$1 \times 2 \times 3 = 6 \Rightarrow 6^3 - 62 = 216 - 36 = 180$$

$$2 \times 3 \times 2 = 12 \Rightarrow 12^3 - 12^2 = 1728 - 144 = 1584$$

$$1 \times 2 \times 6 = 12 \Rightarrow 12^3 - 12^2 = 1728 - 144 = 1584$$



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- 26 (C) Ghiyasuddin Tughlaq had founded Tughlaq dynasty in 1320 AD. Nasiruddin Mahmud was the last ruler of Tughlaq dynasty (1395-1412 AD).
- 27. (B) The Palk Strait separates India and Srilanka. It lies between the Gulf of Mannar and the Bay of Bengal. It is bounded on the south by Pamban Island (India), Adam's (Rama's) Bridge (a chain of shoals), the Gulf of Mannar, and Mannar Island (Sri Lanka). The southwestern portion of the strait is also called Palk Bay. The strait is 40 to 85 miles (64 to 137 km) wide, 85 miles long, and less than 330 feet (100 metres) deep.
- 28. (D) The purpose of Directive Principles of State Policy is to establish social and economic democracy. Political democracy is established by the Fundamental Rights.
- 29 (D) MAT or Minimum Alternative Tax was introduced in the budget of 1996-97. Under MAT a company is required to pay a minimum tax of 7% profit, in case the tax on the total income computed under the normal provisions of law works out to less than this amount.
- 30. (D) Because the density of the clouds is less than that of the air. Same phenomena is behind the floating of a ship in a sea.
- 31. (A) A dry cell has the electrolyte immobilized as a paste, with only enough moisture in the paste to allow current to flow. The electrolyte is Ammonium Chloride in the form of a paste next to the Zinc anode. In some more modern types of so called 'high power' batteries, Ammonium Chloride has been replaced by Zinc Chloride.
- 33. (B) India has won the 2017 T20 Blind World Cup by defeating Pakistan in the final by 9 wickets at Bengaluru's M Chinnaswamy Stadium. Indian player Prakash Jayaramaiah was adjudged as man of the match for his outstanding innings in the match while Badar Munir from Pakistan was given the man of the series award for his 570 runs in the tournament.
- 34. (B) The Indian Space Research Organisation (ISRO) has successfully launched a record of 104 satellites from the Satish Dhawan Space Centre (SDSC) in Sriharikota, Andhra Pradesh through PSLV C-37 launch vehicle. The PSLV-C37 first launched the 714 kg Cartosat-2 Series satellite for earth observation and then inject 103 co-passenger satellites, together weighing about 664 kg at lift-off into polar Sun Synchronous Orbit, about 520 km from Earth. With the successful launch, India scripted history by becoming the first country in the world to launch 104 satellites in a single rocket.

- 35. (C) The Kala Ghoda festival is a most prominent cultural event in Mumbai. The nine-day long festival is the center of attraction for thousands of visitors from all over the country as well as from the world. Kala Ghoda festival is held annually in the months of January or February.
- 36 (B) Nehru drafted the resolution on Fundamental Rights. The Karachi Session was presided over by Sardar Vallabh Bhai Patel.
- 37. (A) If the stars are seen raised perpendicular to the horizon by an observer then the observer will be at the equator because celestical equator is an imaginary circle around the sky directly above the earth's equator. It is always 90° from the pole. All the stars rotate in a path that is parallel to the celestical equator.
- 39. (A) The Twelfth Five-Year Plan of the Government of India has been decided to achieve a growth rate of 8.2% but the National Development Council (NDC) on 27 December 2012 approved a growth rate of 8% for the Twelfth Five-Year Plan.
- 40. (D) Initially at start of heating from 0°C to 4°C there will be a contraction as a result of which volume decreases. On further heating beyond 4°C to 10°C the molecules gain kinetic energy and start moving more randomly. Thus, intermolecular distance increases as a result of which its volume increases.
- 43. (B) The world's longest elevated cycle path "the winding viaduct" has been opened in the city of Xiamen, China which can handle about 2,023 cyclists with a speed limit of 15 miles per hour. The five-mile long and 16-feet wide bicycle pathway can carry 2,023 cyclists per hour, while 300 hire bikes are available for people who do not have bicycles. The architecture firm responsible is Copenhagen-based firm Dissing+Weitling, known for the creation of the Danish Bicycle Snake cycle route.
- 44. (C) The Radcliffe Line is a boundary demarcation line between India and Pakistan upon the Partition of India. The Radcliffe Line was named after its architect, Sir Cyril Radcliffe.
- 45. (A) The Ravva offshore block is in Krishna-Godavari basin of Andhra Pradesh. It is the area of a great reserve of petroleum and natural gas. The field is operated by Cairn India which holds a 22.5% stake in it. Its partners in the field include ONGC (40%), Videocon Petroleum (25%) and Ravva Oil (12.5%).



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- (A) Article 24 of the constitution states that, No child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment. It is provided that nothing in this sub clause shall authorise the detention of any person beyond the maximum period prescribed by any law made by Parliament under sub clause (b) of clause (7); or such person is detained in accordance with the provisions of any law made by Parliament under sub clauses (a) and (b) of clause.
- (D) Art. 269 says that taxes on income other than agricultural income shall be levied and collected by the Government of India and distributed between the Union and States. Entry 46 in the state list of Seventh Schedule gives power to the state governments to impose agricultural income
- 48 (D)The study of birds is called ornithology. Salim Ali of India, whose work set the standard for surveys of birds all over the world, can rightly be called the father of ornithology.
- Cardiology: The branch of medicine that deals with the diagnosis and treatment of diseases and disorders of the heart.
- Hematology: The study of the nature, function, and diseases of the blood and of blood-forming organs.
- Odontology :The branch of science concerned with the anatomy, development, and diseases of teeth and related structures
- (D) The book "Army and Nation: The Military and Indian Democracy since Independence" has been authored by Steven Wilkinson, a professor of political science and International relations at Yale University. It is about Indian Army's relationship with civilian government Independence. It is in news because Pakistan Army Chief General Qamar Javed Bajwa has advised his officers to read the book "Army and Nation" to understand how India succeeded in keeping the military out of politics.
- 51. (B) Let the two numbers be A and B.

$$A + B = 18$$

$$A^2 + B^2 = 256$$

 $(A + B)^2 = A^2 + B^2 + 2AB$

 \Rightarrow (18)² = 256 + 2AB

 \Rightarrow 324 = 256 + 2AB

 \Rightarrow 2AB = 68

 \Rightarrow AB = 34

.. The product of two numbers = 34

52. (A) Let r be the radius $4\pi (r + 2)^2 - 4\pi r^2 = 792$

$$\Rightarrow (r+2)^2 - r^2 = \frac{792}{4\pi}$$

$$\Rightarrow r^2 + 4r + 4 - r^2$$

$$=\frac{792\times7}{4\times22}=63$$

$$\Rightarrow$$
 4 r = 63 – 4 = 59

$$\Rightarrow$$
 r = 14.75 m

∴ Required radius = 14.75 m

53. (C)
$$\sin 3A = \cos (A - 56^{\circ})$$

$$\Rightarrow$$
 cos (90° - 3A) = cos(A - 56°)

$$\Rightarrow$$
 90° – 3A = A – 56°

$$\Rightarrow$$
 90° + 56° = 3A + A

$$\Rightarrow$$
 4A = 146°

$$\Rightarrow$$
 A = $\frac{146}{4}$ = **36.5**°

54. (D) Ist person
$$\rightarrow$$
 6 4

IInd person \rightarrow 8 24 3

I + II + Boy \rightarrow 3

∴ Share of Boy =
$$\frac{1}{8}$$
 × 5000 = ₹ **625**

55. (B) Let the sum be P.

$$\therefore 1015 = P \left[\left(1 + \frac{3}{100} \right)^2 - 1 \right]$$

$$\left[\because C.I. = P \left[\left(1 + \frac{r}{100} \right)^n - 1 \right] \right]$$

$$\Rightarrow 1015 = P \left[\left(\frac{103}{100} \right)^2 - 1 \right]$$

$$\Rightarrow 1015 = P\left(\frac{10609 - 10000}{10000}\right)$$

$$\Rightarrow P = ₹ \frac{1015 \times 10000}{609}$$

$$= \quad \ \ \, \frac{10150000}{609}$$

$$∴ S.I. = \frac{10150000 \times 2 \times 3}{609 \times 100} = ₹ 1000$$



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56. (C) We know that,

Here,

l = 7875 (The number nearer to 8000 which is divisible by 225)

a = 1125 (The number nearer to 1000 which is divisible by 225)

d = 225

ATO,

7875 = 1125 + (n-1)225

 \Rightarrow (7875 – 1125) = (n – 1)225

$$\Rightarrow (n-1) = \frac{6750}{225}$$

$$\Rightarrow$$
 $(n-1) = 30$

$$\Rightarrow n = 30 + 1 = 31$$

- :. Required answer = 31
- 57. (A) Let x be the maximum marks then, pass marks = 24% of x + 12 = 30% of $x + 6 \Rightarrow 6\%$ of $x = 6 \Rightarrow x = 100$

Maximum marks x = 100

Pass marks = $\frac{30}{100} \times 100 + 6 = 36$.

- 58. (D) Here, 12 2 = 10, 16 6 = 10, 24 14 = 10Now, LCM of 12, 16 and 24 = 48
 - .. The lowest 4-digit number exactly divisible by 48 = 1008
 - \therefore Required number = 1008 10 + 48 = **1046**

59. (B)
$$\frac{\sqrt{24} + \sqrt{600}}{\sqrt{216}} = \frac{2\sqrt{6} + 10\sqrt{6}}{6\sqrt{6}}$$

$$=\frac{12\sqrt{6}}{6\sqrt{6}}=\mathbf{2}$$

60. (C) Let the required number of extra days =D-4.

 $300 \times 31 = 27 \times 300 + 120 \times D$

$$4 \times 300 = 120 \times D$$

- \Rightarrow D = 10 days
- \therefore Extra number of days = (10 4) = 6 days
- 61. (C)Downstream speed (u) = $\frac{D}{T} = \frac{8}{40} \times 60$

= 12 km/h

Upstream speed (v) = $\frac{D}{T} = \frac{3}{30} \times 60$

= 6 km/h

Speed of boat in still water = $\frac{1}{2}(u + v)$

$$=\frac{1}{2}(12+6)=9$$
 km/h

Speed of stream = $\frac{1}{2}(u-v) = \frac{1}{2}(12-6)$ = 3 km/h

(C) Let the original number of students in two classes be 2x and 3x respectively. ATQ,

 $\frac{2x+20}{3x+20} = \frac{4}{5}$

 $\Rightarrow 10x + 100 = 12x + 80$

 $\Rightarrow 12x - 10x = 100 - 80$

 $\Rightarrow 2x = 20$

 $\Rightarrow x = \frac{20}{2} = 10$

.: Total number of students originally

= 2x + 3x = 5x (put x = 10)

 $= 5 \times 10 = 50$

63. (D) $4 \sin^2\theta + 5\cos^2\theta$

 $= 4 \sin^2\theta + 4 \cos^2\theta + 5\cos^2\theta$

 $= 4(\sin^2\theta + \cos^2\theta) + 5\cos^2\theta$

 $= 4 + \cos^2\theta$

 $[\because \sin^2\theta + \cos^2\theta = 1]$

 \therefore Minimum value of cos $\theta = -1$

But $\cos^2\theta \ge 0$, when $\theta = 90^\circ$

 $[\because \cos 0^{\circ} = 1, \cos 90^{\circ} = 0]$

- \therefore Required minimum value = 4 + 0 = 4
- 64. (B) $x = 3 + 2\sqrt{2}$

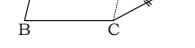
$$\therefore \frac{1}{x} = 3 \times 2\sqrt{2}$$

$$\therefore \left(\sqrt{x} - \frac{1}{\sqrt{x}}\right)^2 = x + \frac{1}{x} - 2$$

$$\Rightarrow \left(\sqrt{x} - \frac{1}{\sqrt{x}}\right)^2 = 3 + 2\sqrt{2} + 3 - 2\sqrt{2} - 2 = 4$$

$$\Rightarrow \sqrt{x} - \frac{1}{\sqrt{x}} = 2 \Rightarrow 3\left(\sqrt{x} - \frac{1}{\sqrt{x}}\right) = 3 \times 2 = 6$$

65. (C)



 $\angle BCE = 94^{\circ}$, AB = CD = ED (given)

 \therefore CD = ED = CE [\because AB = CE]

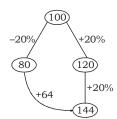
 Δ ECD is an equilateral triangle.

∴ ∠ECD = 60°

 $\angle BCD = 94^{\circ} + 60^{\circ}$

= 154°

66. (D) Let the cost price of an article = ₹ 100



Original Profit = 20%

New Profit =
$$\frac{64}{80} \times 100 = 80\%$$

:. Change in profit percent

$$=\frac{(80-20)}{20}\times100$$

67. (C) $\tan^2 \alpha = 1 + 2 \tan^2 \beta$

$$\Rightarrow$$
 sec² α - 1 = 1 + 2(sec² β - 1)

$$\Rightarrow \sec^2 \alpha - 1 = 2 \sec^2 \beta - 1$$

$$\Rightarrow \frac{1}{\cos^2 \alpha} = \frac{1}{2\cos^2 \beta}$$

$$\Rightarrow \sqrt{2} \cos \alpha = \cos \beta$$

$$\therefore \sqrt{2} \cos \alpha - \cos \beta = \mathbf{0}$$

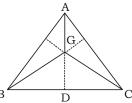
$$\therefore x^5 - 8x^4 + 8x^3 - 8x^2 + 8x - 2$$

$$= x^5 - (7 + 1)x^4 + (7 + 1)x^3 - (7 + 1)x^2 + (7 + 1)x - 2$$

$$= x^5 - 7x^4 - x^4 + 7x^3 + x^3 - 7x^2 - x^2 + 7x + x - 2$$
When $x = 7$,

When
$$x = 7$$
,
= $7^5 - 7^5 - 7^4 + 7^4 + 7^3 - 7^3 - 7^2 + 7^2 + 7 - 2 = 5$

69. (C)



Area of $\triangle ABC = 6 \times ar(\triangle BGD)$ $= 6 \times 9 = 54 \text{ cm}^2$

70. (D) By componendo and dividendo,

$$\frac{\left(x^3+3x\right)+\left(3x^2+1\right)}{\left(x^3+3x\right)-\left(3x^2+1\right)}=\frac{234+109}{234-109}$$

$$\Rightarrow \frac{(x+1)^3}{(x-1)^3} = \frac{343}{125}$$

$$\Rightarrow \left(\frac{x+1}{x-1}\right)^3 = \left(\frac{7}{5}\right)^3$$

$$\Rightarrow \frac{x+1}{x-1} = \left(\frac{7}{5}\right) \Rightarrow 5x + 5 = 7x - 7 \Rightarrow x = 6$$

71. (B) Let the original volume of cylinder be 100 ⇒ Volume after change

$$= 100 \times \frac{150}{100} \times \frac{150}{100} \times \frac{40}{100} = 90$$

Hence, percent decrease = 100 - 90 = 10%

72. (C) $1 \times 3 \times 5 \times 7 \times \dots \times 99 \times 2^8$.

For calculating number of zeros we have to find the combination of 2 and 5. Here no. of 2's is 8. So the max possible number of zeros is 8.

73. (D) Percentage of students failed in 2016

$$= \frac{35}{200} \times 100 = 17.5\%$$

74. (A) Total passed students,

Total students

$$= 170 + 195 + 200 = 565$$

:. Required percentage

$$= \frac{455}{565} \times 100 = \frac{9100}{113} = 80 \frac{60}{113} \%$$

75. (B) Required percentage

$$=\frac{20}{170}\times100=\frac{200}{17}=\mathbf{11}\frac{\mathbf{13}}{\mathbf{17}}\%$$

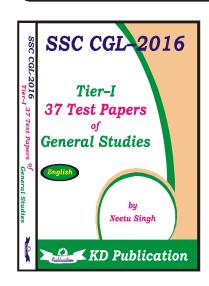


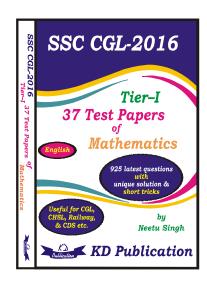
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MEANINGS IN ALPHABETICAL ORDER

Words	Meaning in English	Meaning in Hindi
Duct	a channel or tube for conveying something	वाहिका, नलिका
Emanant	flowing forth	बहता हुआ
Emanate	spread out from a source	उत्पन्न होना
Eminent	famous and respected	प्रतिष्ठित
Illegible	not clear enough to be read.	अस्पष्ट, अपठनीय
Imminent	about to happen	होने ही वाला
Indelible	impossible to forget or remove	अमिट
Induce	bring about or give rise to	प्रेरित करना
Inexplicable	unable to be explained	गूढ़, जिसे समझाया ना जा सके
Inexpressible	(of a feeling) too strong to be described	अवर्णनीय
Ingrate	an ungrateful person.	कृतघ्न, जो एहसान ना मानता हो
Mitigate	make less severe, serious, or painful.	शांत करना, कम करना
Secretion	a process by which substances are produced and discharged	स्राव
	from gland	
Stem	the main body or stalk of a plant or shrub	तना
Triumph	a great victory or achievement.	जीत
Unintelligible	impossible to understand	जिसे समझा नहीं जा सके

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SSC MOCK TEST - 88 (ANSWER KEY)

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25.	(C) (B) (D) (A) (D) (C) (C) (C) (A) (D) (A) (A) (B) (B) (C) (C) (B) (A) (A) (B) (C) (D) (C) (B) (A) (C) (D) (C) (C) (C) (C) (C) (C) (C) (C) (C) (A) (D) (A) (A) (C) (D) (B) (C) (C) (D) (C) (C) (D) (C) (D) (C) (C) (D) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50.	(C) (B) (D) (D) (D) (A) (A) (B) (B) (C) (B) (A) (D) (A) (D) (C) (A) (B) (C) (A) (D) (D) (A) (D) (D) (A) (D) (D) (A) (D) (D) (A) (D)	51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 71. 72. 73.	(B) (A) (C) (D) (B) (C) (A) (D) (B) (C) (C) (C) (C) (D) (B) (C) (D) (C) (D) (C) (D) (C) (D) (C) (D) (A) (B) (C) (D) (A) (B)	76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 99. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.	(B) (A) (A) (D) (A) (D) (C) (C) (B) (B) (B) (B) (B) (B) (C) (B) (C) (C) (B) (B) (B) (B) (B) (B) (B) (B) (B) (B
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- 76. (B) Change 'stem' into 'stems', as the subject of the sentence 'need' is singular.
- 77. (A) Change 'adopt' into 'adapt', which means 'to make oneself suitable to a new environment'. 'Adopt' means 'to accept'.
- 78. (A) Change 'is' into 'are', as 'people' takes plural
- 79. (A) Change 'you' into 'your'. 'Gerund' is preceded by a possessive adjective.
- 89. (C) 'Information' takes no plural form.

Mock-87 Correction

60. Read the correct option as (B). The explantion given is correct.

Note: Whatsapp with Mock Test No. and Question No. at 9560866063 for any of the doubts. Join the group and you may also share your suggestions and experience of Sunday Mock Test.

Note: If you face any problem regarding result or marks scored, please contact 9313111777