STAFF SELECTION COMMISSION

CONSTABLE (GD) IN CAPFS, SSF, ASSAM RIFLES & NCB

SOLVED PAPER

(6th March 2024: Shift-1)

Time Allotted-1 hours

Max marks-160

8

Important Instructions:-

- This paper contains 80 questions which are divided into 4 sections. Each section contains 20 questions.
 - General Intelligence & Reasoning
 - · General Knowledge & General Awareness
 - Elementary Mathematics
 - English
- There will be 2 marks for each correct answer and also there will be negative marking of 0.5 marks for each wrong answer.
- Each question is compulsory to attempt and there will be no negative marking for unattempted questions.

4. C

General Intelligence & Reasoning

Arrange the given words in alphabetical order: 1. 1. CARROT 2. CUCUMBER 3. CELERY 4. CABBAGE 5. CAULIFLOWER **1.** 4, 1, 5, 3, 2 **2.** 4, 5, 1, 3, 2 4. 4, 1, 5, 2, 3 **3.** 4, 1, 3, 5, 2

2. A piece of paper is folded and punched as shown below in the question figures. From the given option figures, indicate how it will appear when opened?

- **3.** If 100 @ 55# 65 * 13 = 160 and 145 @ 90 # 180 * 30 = 295, then 58 (a) 63 # 90 * 15 = ?
 - 1.130 **2.** 127 3. 135 4.143
- 4. Which of the following letter will replace the question mark (?) in the given series? DOLLES

2. D 3. E

5. From the given option figures, select the one in which the question figure is hidden/embedded. (rotation is not allowed)?



- 6. In a certain code language.'DOMKE' is coded as '9670', 'KAOBF' is coded as '73849', 'FAMD" is coded as '4063'. What can be the code for 'M' in that code language?
 - 1.7 2.9 **3.** 6 4. 2
- 7. In the following question, select the missing number from the given series.

376, 373, 382, 355, 436, ?

8. In the following question below are given some statements followed by some conclusions based on those statements

Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion(s) logically follows the given statements.

- Statements:
- Some L are G. L.
- II. All T are G.
- **Conclusions:**
- L. No T is L.
- II. No G is T
- 1. Only conclusion I follows
- 2. Both conclusions I and II follows
- 3. Neither conclusion follows
- 4. Only conclusion II follows
- A is the mother of B. B is the sister of C. C is the father of D. D is the brother of E. E is the husband of F. F is the sister of
- G. How is C related to F?
- 1. Sister

9.

- 2. Mother 3. Husband's father 4. Father
- 10. By interchanging the given two signs which of the following equation will be correct?

$$\div$$
 and +
1. 8 + 4 × 5 \div 2

1.

1.
$$8 + 4 \times 5 \div 2 - 6 = 18$$
2. $8 + 4 \times 5 \div 4 - 6 = 8$ 3. $76 \div 4 \times 2 - 90 + 3 = 54$ 4. $9 \times 18 + 27 \div 36 - 45 = -4$

$$\div 4 \times 2 - 90 + 3 = 54$$

11. In the following question, select the figure which can be placed at the sign of question mark (?) from the given alternatives.

- 12. Five friends P, B, C, G and H are sitting around a circular table facing towards the centre. B is siting to the immediate left of C. G and H are not the immediate neighbour of C. H is sitting second to the right of P. Who is sitting on the immediate left of **P**?
- 1. H 2. C 3. B 4. G 13. In the following question, select the missing number from the given series.

14. If a mirror is placed on the line AB, then out of the option figures which figure will be the right image of the question figure?





15. In the following question, select the figure which can be placed at the sign of question mark (?) from the given alternatives.



16. Which of the following groups of letters when sequentially placed from left to right will complete the given series? sstttt ussttt uussttttu ssttttuussttt uussttttuu

1. uusu **2.** utut 3. ttut 4. stst

- 17. Eight teachers Jatin, Abhi, Gopal, Heena, Ishaa, Rohit, Kajal and Leela are sitting around a circular table facing opposite to the centre (not necessarily in the same order). Abhi is second to the left of Heena. Rohit is third to the right of Heena. Gopal is second to the right of Jatin. Rohit is second to the left of Jatin. Kajal is third to the left of Ishaa. Who is siting to the immediate left of Abhi?
- 1. Gopal 2. Leela 3. Ishaa 4. Jatin 18. In the following question, select the related letter pair from the given alternatives.
 - GT : HV :: ?
 - 1. LL : NA **2.** DQ : ES **3.** FF : AB 4. YK : TT
- 19. In the following question, select the related letters from the given alternatives. YZM : MZY :: FKU : ?

1. OPK 2. UKF **3.** MNO **4**. KMF

20. In a certain code language, 'COULD' is coded as '67095', 'CROWN' is coded as '85317', 'DOUBT' is coded as '26450', What can be the code for 'D' in that code language? 1.5 2.4 3.6 4.2

General Knowledge & General Awareness

- 21. Gugga Naumi is mainly celebrated in which of the following states?
 - 1. Andhra Pradesh 2. Haryana 3. Madhya Pradesh 4. Tamil Nadu
- 22. What is the maximum strength of the Rajya Sabha, and how many members are nominated by the President?
 - 1. Maximum strength is 545, and 25 members are nominated by the president
 - 2. Maximum strength is 245, and 12 members are nominated by the President
 - 3. Maximum strength is 550, and 238 members are nominated by the President
 - 4. Maximum strength is 250, and 12 members are nominated by the President
- 23. HYVS in case of green revolution, stands for:
 - 1. High Yield vary seeds
 - 2. Highest Yield Varying Soil
 - 3. High Yielding Vitcher Soil
 - 4. High Yielding Variety Seeds
- 24. Who was the teacher of Chandragupta Maurya of the Maurya Empire?

2.	Harshvardhana
4.	Megasthenes

1. Kautilya 3. Kanishka

- 25. This legendary Indian classical flautist is known for his mastery of the bansuri (bamboo flute) and his mesmerizing performances. Who is he?
 - 1. Shiv Kumar Sharma 2. Ravi Shankar 3. Hariprasad Chaurasia 4. Zakir Hussain
- 26. When something accelerates along a circular path, keeps
 - it going in the circle. 1. Velocity
 - 2. Friction
 - 3. Elastic force 4. Centripetal force
- 27. Economists call unemployment prevailing in Indian farms as unemployment.
- 1. disguised 2. open 4. frictional 3. closed 28. The partition of Bengal took place in
- 1. 1901 2. 1915 **3.** 1905 4. 1911
- 29. Of the following, which is Kumudini Lakhia most famous dancing style?
 - 1. Kuchipudi 2. Kathak
 - 3. Sattriya 4. Bharatnatyam
- 30. Mumbai's Byculla Railway Station received UNESCO'Asia Pacific award on Monday i.e., 24th July. This award was declared in November 2022
 - 1. Cultural Heritage 2. Bronze
 - 3. Gold 4. Green
- 31. The growth targets for the fourth five-year plan was set with respect to
- 1. Net Domestic Product 2. Gross Domestic Product 3. National Income 4. Gross National Product
- 32. Lakshya Sen is a player of which sport?
- 1. Table Tennis 2. Cricket 3. Kabaddi 4. Badminton
- 33. In the context of a government budget, what does the term "fiscal deficit" represent?
 - 1. The surplus funds available for public spending
 - 2. The difference between government revenue and government expenditure
 - 3. The portion of the budget allocated for defense spending 4. The total government debt
- 34. In June 2023, who has been appointed as the Director of the United Nations Office for Outer Space Affairs (UNOOSA) in Vienna?
 - 1. Asoke Kumar Mukerji 2. Syed Akbaruddin
 - 3. Ruchira Kamboj 4. Aarti Holla-Maini
- 35. In shotput, for male athletes, the metal ball weights kg. 1.8.16 2. 7.26 3. 9.12 4.6.16
- 36. Which feature of the Indian Constitution reflects the idea that the powers of government are divided among the executive, legislative, and judicial branches to prevent the concentration of power?
 - 1. Sovereign 2. Separation of powers
 - 3. Federalism 4. Parliamentary system
- 37. Which of the following statements is correct regarding the Pradhan Mantri Vishwakarma scheme?

I. Pradhan Mantri Vishwakarma scheme is a central sector scheme.

- II. The scheme covers artisans and craftspeople engaged in 18 trades.
- 1. Only II 2. Only I
- 3. Both I and II 4. Neither I nor II
- **38.** Which of the following term used in Kathak for standing? 1. Foot work 2. Thaat 3. Pirouettes 4. Sama
- 39. Specifications of the Football is: a circumference should be between
 - 1. 10 cm and 25 cm 2. 125 cm and 225 cm
 - 4. 90 cm and 125 cm 3. 68 cm and 70 cm
- 40. The Gautama Buddha taught in the language of the ordinary people,

1. Prakrit 2. Odia 3. Hindi 4. Tamil

Elementary Mathematics

- 41. 50 percent of marked price is equal to 70 percent of cost price. If no discount is given, then what will be the profit percentage? **1.** 20 percent **2.** 50 percent **3.** 60 percent **4.** 40 percent
- 42. If the ratio of the areas of two squares is 4 : 9, then what is the ratio of their corresponding sides?
 - 1.3:2 **2.** 4 : 3 **3.** 2 : 3 4.1:3
- 43. The LCM of two numbers is 147, and their HCF is 7. If one numbe is 21, find the other number. 1.49

2. 7 3. 21 4.28

- 44. Vikas purchased two bicycles, first for ₹ 15000 and the second for ₹ 14000. He sold both the bicycles, first one at the profit of 10 percent and the second at a loss of 20 percent. What is the overall profit or loss?
 - 1. Profit = ₹ 1000 2. Loss = ₹ 1300
 - 3. Loss = ₹ 1400 **4.** Profit = ₹ 1200
- 45. There are 21 consecutive odd numbers. If the average of first 19 numbers is X, then what is the average of last 2 numbers? 1. X + 21**2.** X + 19 **3.** X + 27 **4.** X + 25
- 46. Sharman is 20 percent less efficient than Vivek. If Vivek can make a helmet in 20 days, then in who many days can 'Sharman' make the same helmet? 4. 23 days
- 1. 27 days 2. 30 days **3.** 25 days 47. Aman can cover a certain distance in 16 hours. When his speed is increased by 5 km/h the same distance can be covered in 14 hours. Find the distance.
 - 1. 540 km 2. 580 km **3.** 600 km 4. 560 km
- 48. Selling price of an article is Rs. 8175 and discount offered is 25 percent. What is the marked price of the article? 4. ₹ 12250 1. ₹ 11700 2. ₹ 10900 3. ₹ 15720
- **49.** What is the value of $96 \times 3 + 48 \div 4 3 \times 4$? 1.314 **2.** 322 **3.** 288 4.364
- 50. The least number which is exactly divisible by 125, 75, 150 and 70?
- 1.2494 **2.** 5250 **3.** 5480 4. 5383 51. What is the profit percentage in selling an article at a discount of 30% which was earlier being sold at a 45% profit? 1.1.1% 2. 1.3% **3.** 1.5% 4. 2.5%
- 52. The average weigh of 10 persons increases by 3.5 kg when a new person comes in place of one of them weighing 85 kg What might be the weight of the new person?
- 1. 100 kg **2.** 110 kg **3.** 130 kg 4. 120 kg 53. R and S together can complete a work in 60 days. S and T
- together can complete the same work in 90 days. If R, S and T all work together, then the same work gets completed in 45 days. How many days will R and T together take to complete the same work?
 - 1. 80 days 3. 50 days 2. 75 days **4.** 60 days
- 54. If Ramesh borrows certain amount from Vikram at simple interest at the rate of 7.5% per annum for four years. What is the principle amount if the total interest that Ramesh has to pay is ₹ 18600?
 - 1.₹68000 2. ₹ 45000 3. ₹ 56000 4. ₹ 62000
- 55. If price is decreased by 5 percent, then by how much percentage consumption should be increased, so that the expenditure remains the same?

1. 5.2 percent	2. 10.5 percent
2 262	4 20 2

- **3.** 26.3 percent 4. 20.3 percent 56. Which of the following number is not divisible by 36? 1. 3168 2. 3096 **3.** 3376 4. 5724
- 57. Aman has appeared in two exams. He scored 420 marks in first exam out of 600 marks. If he got overall 70 percent

marks, then how much percentage he had scored in second examination out of 500?

- 1.80 3. 65 **4.** 70 2.60
- 58. The compound interest (compounding half yearly) received on ₹ 10000 for 1.5 years is ₹ 3676.31. What is the rate of interest per annum?
- 1. 14 percent **2.** 25 percent **3.** 28 percent **4.** 22 percent 59. The radius of a sphere is 4.9 cm. What is the volume of the sphere (approximately)?
 - **3.** 479 cm³ 1. 514 cm³ **2.** 463 cm³ 4. 493 cm³
- 60. Find the fraction which bears the same ratio to $\frac{1}{64}$ that $\frac{4}{7}$ does to $\frac{5}{16}$.

2. $\frac{1}{35}$ 3. $\frac{1}{40}$

English

- 61. Improve the underlined part of the sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct. She's such a dearest friend.
 - 1. No improvement

 $1.\frac{1}{25}$

- 2. such a dearer 3. such a dear
 - 4. such a dears
- 62. Choose the most appropriate synonym of the underlined word. As she grew older, she began to question the religious teachings of her youth and became more agnostic.
- 1. Godly 2. Religious 3. Skeptic 4. Demonic 63. Improve the underlined part of the Sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct.
 - I can't hearing what he's saying
 - 1. hear what 2. heard what
 - 3. hears what 4. No improvement
- 64. Choose the word that is opposite in meaning to the given word. Array
 - 1. Adorn 2. Apparel 3. Unit 4. Cluster
- Find the part of the given sentence that has an error in it. If 65. there is no error, choose 'No error'.
 - 'Enabling nursing homes to operate effectively during a pandemic require clear-eyed understanding of their capabilities, and limitations.
 - 1. No error
 - 2. understanding of their capabilities, and limitations.
 - 3. during a pandemic require a clear-eyed
 - 4. Enabling nursing homes to operate effectively
- 66. Choose the most appropriate antonym of the underlined word. But he was so profligate in his morals that his name cannot be mentioned with anything like tolerance.
 - 1. Lewd **2.** Liberal 3. Conserve 4. Wild
- Select the most appropriate option for the given blank. 67. The brook from an underground spring.
 - 1. had emanate 2. emanates
 - 3. has emanate 4. has emanating
- 68. Choose the idiom/phrase that can substitute the highlighted group of words meaningfully.
 - I admit that I did it suddenly without thinking about it.
 - 1. Hit the nail on the head
 - 2. Let the cat out of the bag
 - **3.** In the heat of the moment
 - 4. Kicked the bucket
- 69. Four sentences are given, out of which three have all correct spellings. Choose the sentence with the incorrect spelt word/ words.
 - 1. Once he locked me in and was gone three days, it was dreadful lonesum.

4. $\frac{1}{20}$

- 2. It had been his companion for twelve years, always standing on the same spot, always lending its handle to him in the early morning
- 3. Mr. Lloyd a second time produced his snuff-box.
- 4. How much I wished to reply fully to this question!
- 70. Fill in the blank with the correct homophone: coming from the kitchen.
 - 1. Their **2.** There 3. They 4. They're
- 71. Select the incorrectly spelt word from the given sentence. Father Costello assured me that he'll perform the rites today. 1. rites 2. perform 3. assured 4. today
- 72. Select the most appropriate word to fill in the blank. The area is full of quaint villages. 2. little 1. puny 3. a little 4. short
- 73. Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'. Be the best, more better than the rest.
 - 1. No error 2. Be the best
 - **3.** more better than 4. the rest
- 74. Find the part of the given sentence that has an error in it. If there is no error choose 'No error'.
 - These are your slippers on the ground, isn't they?
 - 1. No error 2. slippers on the 4. ground, isn't they?
 - 3. These are your

- 75. In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.
 - Pitch and toss
 - 1. A game of chance
 - 2. A brief account of something
 - **3.** To reveal a secret
 - 4. To feel unlucky
 - **Comprehension:**

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given.

- M. Reed had been dead for(1) years: it was in the chamber his last; here he (3) ____ in state; hence his coffin was (2)_____ by the undertaker's men: and, since that day a (5)_____ (4) of dreary consecration had guarded it from frequent intrusion.
- 76. Select the most appropriate option to fill in the blank No. 1. **1.** the 2. an 3. nine 4. complete
- 77. Select the most appropriate option to fill in the blank No. 2. 1. breathed 2. exhaled 3. sigh 4. panted
- **78.** Select the most appropriate option to fill in the blank No. 3. 1. lay 2. kept 3. keeps 4. laid
- **79.** Select the most appropriate option to fill in the blank No. 4. 1. borne 2. bear 3. bearded 4. beared
- 80. Select the most appropriate option to fill in the blank No. 5. 1. liking 2. sense 3. alignment 4. meaning

Answer Key

1.	(1)	2.	(2)	3.	(2)	4.	(4)	5.	(4)	6.	(3)	7. (1)	8.	(3)	9.	(3)	10.	(3)
11.	(1)	12.	(2)	13.	(2)	14.	(4)	15.	(3)	16.	(2)	17. (4)	18.	(2)	19.	(2)	20.	(3)
21.	(2)	22.	(4)	23.	(4)	24.	(1)	25.	(3)	26.	(4)	27. (1)	28.	(3)	29.	(2)	30.	(1)
31.	(1)	32.	(4)	33.	(2)	34.	(4)	35.	(2)	36.	(2)	37. (3)	38.	(2)	39.	(3)	40.	(1)
41.	(4)	42.	(3)	43.	(1)	44.	(2)	45.	(1)	46.	(3)	47. (4)	48.	(2)	49.	(3)	50.	(2)
51.	(3)	52.	(4)	53.	(4)	54.	(4)	55.	(2)	56.	(3)	57. (4)	58.	(4)	59.	(4)	60.	(2)
61.	(3)	62.	(3)	63.	(1)	64.	(3)	65.	(3)	66.	(3)	67. (2)	68.	(3)	69.	(1)	70.	(4)
71.	(3)	72.	(2)	73.	(3)	74.	(4)	75.	(1)	76.	(3)	77. (1)	78.	(4)	79.	(1)	80.	(2)

Answers with Explanations

1. **Option (1) is correct.** The correct order of the given words are:

4. CABBAGE
1. CARROT
5. CAULIFLOWER
3. CELERY
2. CUCUMBER

Hence, 4, 1, 5, 3, 2 is the correct answer.

2. **Option (2) is correct.** After unfolding the paper, it will appear as follows:

Option (2) is correct. 3.

Given equation: 100 @ 55 # 65 * 13 = 160 and, 145 @ 90 # 180 * 30 = 241

From these equations, we get, (a) denotes addition, # denotes addition and * denotes division.

So, $100 + 55 + 65 \div 13 = 160$ $\Rightarrow 100 + 55 + 5 = 160$

 $\Rightarrow 160 = 160$ And. $145 + 90 + 180 \div 30 = 241$ \Rightarrow 145 + 90 + 6 = 241 $\Rightarrow 241 = 241$ Similarly, for 58 @ 63 # 90 * 15 $\Rightarrow 58 + 63 + 90 \div 15$ \Rightarrow 58 + 63 + 6 $\Rightarrow 127$ Hence, 127 is the correct answer.

4. **Option (4) is correct.**

Given series: R, O, L, I, F, ? The pattern followed here is:

- R 3 = O
- O 3 = L
- L 3 = I
- I 3 = F
- F 3 = C

Hence, C is correct answer.

5. **Option (4) is correct.**

The given image is embedded in option (4) as follows:-





22. Option (4) is correct.

The Rajya Sabha, the upper house of the Indian Parliament, can accommodate up to 250 members at maximum capacity. Among these, the President of India nominates 12 individuals renowned for their expertise in areas like literature, science, art, and social service.

23. Option (4) is correct.

In the context of the Green Revolution, "HYVs" stands for "High Yielding Variety Seeds". These crop strains have undergone selective breeding to generate notably greater yields in comparison to conventional varieties.

24. Option (1) is correct.

Chandragupta Maurya's teacher was Chanakya. Chanakya, also known as Kautilya or Vishnugupta, played a pivotal role in shaping Chandragupta's rise to power. He is credited with mentoring Chandragupta in statecraft, military strategy, and economics.

25. Option (3) is correct.

The famous Indian flute player, Pandit Hariprasad Chaurasia, is known for playing the bansuri (bamboo flute) exceptionally well and putting on mesmerizing shows. He is a highly respected figure in Hindustani classical music, renowned for his virtuosity on the bansuri. His performances have brought global recognition to this beautiful instrument.

26. Option (4) is correct.

When something accelerates along a circular path, centripetal force keeps it going in the circle. Centripetal force is the force that keeps an object moving in a circular path. It is a net force that acts on an object, always directed towards the centre of the circle. The magnitude of the centripetal force is constant and depends on the object's mass, tangential velocity, and the distance of the object from the centre of the circle.

27. Option (1) is correct.

Economists term the unemployment prevalent in Indian farms as disguised unemployment. This situation arises when there are more individuals employed in a sector than required for its efficient functioning.

28. Option (3) is correct.

The Partition of Bengal was announced on 19 July 1905 by the then Viceroy Lord Curzon. And was implemented on 16 October 1905 However, in 1911 it was withdrawn by Lord Hardinge.

29. Option (2) is correct.

Kumudini Lakhia is renowned for her mastery of Kathak dance. However, she is best known for her groundbreaking choreography that challenged and expanded the boundaries of traditional Kathak.

30. Option (1) is correct.

The Byculla Railway Station in Mumbai, India received the UNESCO Asia-Pacific Cultural Heritage Award on July 24, 2023. The 169-year-old station is one of the oldest railway stations in India and a major transportation hub for passengers and goods.

31. Option (1) is correct.

The growth targets for India's fourth five-year plan (1969–1974) were set with respect to net domestic product (GDP). The plan's target growth rate was 5.6%, but the actual growth rate was 3.3%.

32. Option (4) is correct.

Lakshya Sen is a player of badminton. Sen's breakthrough came in 2018 when he won a silver medal at the Youth Olympics in Buenos Aires.

33. Option (2) is correct.

In the context of a government budget, the term "fiscal deficit" represents the difference between the government's total expenditure and its total revenue, excluding borrowings, during a fiscal year. It indicates the amount of money the government needs to borrow to meet its expenditure when its total expenses exceed its total income. A fiscal deficit is an important indicator of the financial health of a government and its ability to manage its budget effectively.

34. Option (4) is correct.

In June 2023, Aarti Holla-Maini was appointed as the Director of the United Nations Office for Outer Space Affairs (UNOOSA).

35. Option (2) is correct.

In shot put, the metal ball, or 'shot', weighs 7.26 kilograms (16 pounds) for men and 4 kilograms (8.82 pounds) for women in open competitions. The shot is 110–130 millimetres (4.3–5.1 inches) in diameter for men and 95–110 millimetres (3.7–4.3 inches) in diameter for women.

36. Option (2) is correct.

The principle of separation of powers fundamentally divides the authority of the government into separate branches legislative, executive, and judiciary — to prevent any single branch from gaining excessive power.

37. Option (3) is correct.

The government launched the PM Vishwakarma scheme on 17.09.2023 to provide end-to-end support to artisans and craftspeople who work with their hands and tools. These traditional artisans and craftspeople are referred to as 'Vishwakarma' and are engaged in occupations such as blacksmiths, goldsmiths, potters, carpenters, sculptors, etc. It is a central sector scheme launched by the Ministry of Micro, Small and Medium Enterprises (MSME). The Scheme covers artisans and craftspeople engaged in 18 trades viz. Hence, Both statements are correct.

38. Option (2) is correct.

The term used in Kathak for standing is 'Thaat'. This word literally translates to 'structure' or 'form' and refers to a stylized standing pose that forms the foundation of many Kathak movements. It emphasizes a straight posture with a certain alignment of the body, including the waist, hips, thighs, neck, arms, chest, and feet.

39. Option (3) is correct.

The specifications of a football (also called a soccer ball) for official matches dictate that its circumference should be between 68 cm (27 inches) and 70 cm (28 inches).

40. Option (1) is correct.

The Gautam Buddha taught in the language of the ordinary people, which was Prakrit.

41. Option (4) is correct.

Marked price will be equal to selling price, as there is no discount.

According to the question,

$$\Rightarrow \frac{50}{100} \times SP = \frac{70}{100} \times CP$$
$$\Rightarrow \frac{CP}{SP} = \frac{5}{7}$$

So, profit percentage =
$$\frac{7x-5x}{5x} \times 100 = 40\%$$

42. Option (3) is correct.

Let the sides of the squares are S_1 and S_2 respectively. According to the question,

$$\Rightarrow \frac{\text{Area of first square}}{\text{Area of second square}} = \frac{S_1^2}{S_2^2}$$
$$\Rightarrow \frac{4}{9} = \frac{S_1^2}{S_2^2}$$
$$\Rightarrow \frac{S_1}{S_2} = \sqrt{\frac{4}{9}}$$
$$\Rightarrow \frac{S_1}{S_2} = \frac{\sqrt{\frac{4}{9}}}{S_2}$$

43. Option (1) is correct. Given, LCM = 147 HCF = 7 1st number = 21 Using, LCM × HCF = 1st number × 2nd number $\Rightarrow 147 \times 7 = 21 \times 2^{nd}$ number $\Rightarrow 2^{nd}$ number = 49

44. Option (2) is correct.Cost price of first bicycle = ₹ 15000Profit percentage = 10%

So, selling price = $15000 \times \frac{110}{100} = ₹ 16500$

Cost price of second bicycle = ₹ 14000 Loss percentage = 20%

So, selling price = $14000 \times \frac{80}{100} = ₹ 11200$

Total cost price of both bicycles = 15000 + 14000 = ₹ 29000Total selling price of both bicycles = 16500 + 11200 = ₹ 27700So, loss = 29000 - 27700 = ₹ 1300

45. Option (1) is correct.

Let the 21 consecutive odd numbers are a, a + 2, a + 4, ..., a + 42.

Here 10th number will be the average of 19 consecutive odd numbers.

According to the question,

a + 20 = X

 $\Rightarrow a = X - 20$

The average of last two numbers = $\frac{a+40+a}{2}$

$$= \frac{2a+82}{2} = \frac{2(X-20)+82}{2}$$
$$= X+21$$

46. Option (3) is correct. According to the question, Ratio of efficiency of Sharman and Vivek = 4 : 5 Given that Vivek can complete the work in 20 days. Hence, total work = 20 × 5 = 100 unit

So, required time Sharman = $\frac{100}{4}$ = 25 days

47. Option (4) is correct.

Let the distance is D km and his initial speed is x km/h. Using, Distance = speed × time $\Rightarrow x \times 16 = (x + 5)14$ $\Rightarrow 2x = 70$ $\Rightarrow x = 35$ km/h So, distance = $35 \times 16 = 560$ km

48. Option (2) is correct. Given that, Selling price of the article = ₹ 8175 And discount = 25% So, marked price = $8175 \times \frac{100}{75} = ₹ 10900$ 49. Option (3) is correct. Value of $96 \times 3 + 48 \div 4 - 3 \times 4$, $= 96 \times 3 + 12 - 3 \times 4$ = 288 + 12 - 12= 28850. Option (2) is correct. The least number which is exactly divisible by 125, 75, 150 and 70 = LCM (125, 75, 150, 70) $125 = 5^3$ $75 = 3 \times 5^{2}$ $150 = 2 \times 3 \times 5^2$ $70 = 2 \times 5 \times 7$ So, LCM(125, 75, 150, 70) = $2 \times 3 \times 5^3 \times 7 = 5250$ From given options, 5250 is the lowest number which is divisible by (125, 75, 150, 70). So, option (2) is correct. 51. Option (3) is correct. Let the CP of the article = ₹ 100 So, selling price of the article = ₹ 145 After giving a discount of 30%, new selling price $=145 \times \frac{70}{100} = ₹ 101.5$ So, required profit percentage = $\frac{101.5 - 100}{100} \times 100 = 1.5\%$ 52. Option (4) is correct. Given that the average weight of 10 persons increases by 3.5 kg, when a person of 85 kg is replaced by a new person. So, weight of new person = $85 + 3.5 \times 10 = 120$ kg **Option (4) is correct.** 53. Given that, R and S together can complete the work in = 60 days S and T together can complete the work in = 90 days R, S and T together can complete the work in = 45 days Let total work = LCM(60, 90, 45) = 180 units So, efficiency of R and S = $\frac{180}{60}$ = 3 units per day Efficiency of S and T = $\frac{180}{90}$ = 2 units per day Efficiency of R, S and T = $\frac{180}{45}$ = 4 units per day

So, efficiency of R = 4 - 2 = 2 units per day And efficiency of T = 4 - 3 = 1 unit per day Hence, time taken by R and T to complete the work $= \frac{180}{100} = 60$ days

$$=\frac{1}{2+1}=60$$
 days

54. Option (4) is correct.

Let the principal amount = P Using, SI = $\frac{P \times R \times T}{100}$

$$18600 = \frac{P \times 7.5 \times 4}{100}$$

P = ₹ 62000

55. Option (2) is correct. Given that, decrease in the price = 5%

Let the percentage change in consumption = a%

Using, successive percentage change = $x + y + \frac{xy}{100}$

$$\Rightarrow 0 = a - 5 - \frac{5a}{100}$$

 $\Rightarrow a = 5.2\%$

56. Option (3) is correct.

From the given options, only 3376 is not divisible by 36. Hence, option (3) is correct.

57. Option (4) is correct.

Let he scored x marks in 2^{nd} paper. According to the question,

$$420 + x = \frac{70}{100} \times (600 + 500)$$

$$\Rightarrow x = 770 - 420 = 350$$

So, percentage marks in second paper = $\frac{350}{500} \times 100 = 70\%$

1)

58. Option (4) is correct.

Let the rate of interest = r% per half yearly Using, CI = P $(1 + r/100)^n$ – P

$$\Rightarrow 3676.31 = 10000 ((1 + r/100)^3 - 3) = \frac{1367.631}{1000}$$
$$\Rightarrow (1 + r/100)^3 = \frac{1367.631}{1000}$$
$$\Rightarrow 1 + \frac{r}{100} = \frac{11.1}{10}$$
$$\Rightarrow r = 11\%$$

So, annual rate of interest = $11 \times 2 = 22\%$

59. Option (4) is correct.

Given that the radius of sphere = 4.9 cm

So, volume of sphere
$$=\frac{4}{3}\pi r^3 = \frac{4}{3} \times \frac{22}{7} \times 4.9 \times 4.9 \times 4.9$$

= 493 cm³

60. Option (2) is correct.

Let the required fraction = xAccording to the question,

$$x: \frac{1}{64} = \frac{4}{7}: \frac{5}{16}$$
$$\Rightarrow x = \frac{4}{7} \times \frac{16}{5} \times \frac{1}{64}$$
$$\Rightarrow x = \frac{1}{35}$$

61. Option (3) is correct.

She's such a dear friend. The word 'dearest' must be replaced by 'dear'. The degree of adjective must be positive, instead of superlative, as there is no comparison of the girl with another set of girls.

62. Option (3) is correct.

The word 'agnostic' refers to a person who believes that nothing is known or can be known of the existence or nature of God. Thus, he is neither godly nor religious, but a skeptic.

63. Option (1) is correct.

I can't hear what he is saying. The phrase 'can't hear what' will replace 'can't hearing what'. The auxiliary verb 'can' will take the base form of verb, not the continuous form. Hence the correct option is (1).

64. Option (3) is correct.

An array refers to an ordered series or arrangement. So, a cluster is synonymous. 'Adorn' means to decorate; 'apparel'

means dress; 'unit' means 'a single thing or a separate part of something larger'. So, the opposite of 'array' is 'unit'.

65. Option (3) is correct.

Enabling nursing homes to operate effectively during a pandemic requires a clear-eyed understanding of their capabilities and limitations. The phrase 'during a pandemic require a clear-eyed' will be replaced by 'during a pandemic requires a clear-eyed'. This is a case of subject-verb disagreement. The subject here is 'enabling' (a singular subject), and the respective verb will be in singular 'requires'. In other words, the enabling of nursing homes requires a clear-eyed understanding.

66. Option (3) is correct.

'Profligate' means 'behaving in a way that is bad or morally wrong and wasteful'. While 'conserve' means ' to avoid wasteful or destructive use of something'. Thus, 'conserve' is the appropriate antonym of 'profligate'.

67. Option (2) is correct.

The brook emanates from an underground spring. The statement gives a general fact, so simple present tense is the correct choice here.

68. Option (3) is correct.

The idiom 'in the heat of the moment' means to say or do it without thinking because you are very angry or excited. The idiom 'hit the nail on the head' means 'to do or say something that is exactly right'. The idiom 'let the cat out of the bag' connotes 'to allow a secret to be known, usually without intending to'. The idiom 'kick the bucket' means to die. Thus, contextually the most appropriate idiom is 'in the heat of the moment'.

69. Option (1) is correct.

Once he locked me in and was gone three days, and it was dreadful lonesum. The correct sentence is: Once he locked me in and was gone three days, and it was dreadful lonesome (lonely).

70. Option (4) is correct.

They're coming from kitchen. 'They're' represents they are/ they were. The main verb 'coming' can stand only with the help of an auxiliary, so 'are' is necessary. Other pronouns do not fit the blank.

71. Option (3) is correct.

The incorrectly spelt word in the given sentence is 'asured'. It must be 'assured', (secure).

72. Option (2) is correct.

The area is full of quaint little villages. The word 'quaint' means unusual or old-fashioned. 'Little' is the correct adjective that is used with plural countable nouns. Puny means small; weak; not effective. So, 'little' is the most correct choice.

73. Option (3) is correct.

Be the best, better than the rest. The phrase 'better than' will replace 'more better than' because double comparatives are not used, as in - 'more' and 'better', both are comparative degrees.

74. Option (4) is correct.

These are your slippers on the ground, aren't they? The phrase 'ground, aren't they?' will replace 'ground, isn't they?' The question tag must be concordant to the number and the pronoun used in the clause. Since, the noun is 'slippers', hence a plural verb is mandated.

75. Option (1) is correct.

The idiom 'pitch and toss' means a game in which the player who throws a coin closest to a mark gets to throw all the coins, winning those that land with the head facing up. So, this is a game of chance.

76. Option (3) is correct.

Mr. Reed had been dead for nine years. The noun 'years' is countable; it needs an adjective of number.

77. Option (1) is correct.

Mr. Reed had been dead for nine years: it was in this chamber he breathed his last. Before a person dies, the correct idiomatic expression describing it is 'breath his last'. The verb must be in past tense, so 'sigh' is eliminated.

78. Option (4) is correct.

Mr. Reed had been dead for nine years: it was in this chamber he breathed his last; here he laid in state. The past tense of 'lay' is 'laid', meaning in a resting position.

79. Option (1) is correct.

Mr. Reed had been dead for nine years: it was in this chamber he breathed his last; here he laid in state; hence his coffin was borne by the undertaker's men. 'Borne' is the past participle of 'bear'. Other forms of 'bear' do not justify.

80. Option (2) is correct.

Hence his coffin was borne by the undertaker's men; and, since that day, a sense of dreary consecration had guarded it from frequent intrusion. 'Sense' implies a faculty by which the body perceives an external stimulus. Here, the sensory faculty of monotonous sanctification is referred.