Directions: Answer the following questions by selecting the correct/most appropriate options.

31. Which of the following is not an effective strategy to assess primary level students' learning in mathematics?

(1) Using primarily group administered tasks.
(2) Designing tasks to differentiate between rote memorisation and conceptual understanding.
(3) Analysing children’s errors to understand their reasoning.
(4) Designing tasks which elicit more than one level of response.

32. Which of the following is not a characteristic of effective mathematics pedagogy?

(1) Making connections with everyday experiences.
(2) Using various teaching-learning strategies for a single concept.
(3) Following strict time rules when introducing a new concept.
(4) Focussing patterns of students errors.
33. In a school, half of students play badminton, one-fourth \((1/4)\) play volleyball, one-eighth \((1/8)\) play tennis, one-sixteenth \((1/16)\) play chess and remaining go for swimming. If the number of students playing volleyball is 160, how many students play chess?

- (1) 20
- (2) 40
- (3) 120
- (4) 80

34. How many quarters are there in \(18 \frac{3}{4}\)?

- (1) 35
- (2) 68
- (3) 75
- (4) 72

33. एक स्कूल में, आधे छात्र बैडमिंटन खेलते हैं, 1/4 छात्र वॉलीबॉल खेलते हैं, 1/8 टेनिस खेलते हैं, 1/16 छात्र टेनारंज खेलते हैं और बाकी छात्रों के लिए जाते हैं। यदि वॉलीबॉल खेलने वाले छात्रों की संख्या 160 है, तो कितने छात्र टेनारंज खेलते हैं?

- (1) 20
- (2) 40
- (3) 120
- (4) 80

34. \(18 \frac{3}{4}\) में कितने चतुर्वेक हैं?

- (1) 35
- (2) 68
- (3) 75
- (4) 72
35. Digits 2, 3, 4, 6, 7, 8 are arranged in the following blanks:

- - - - - -

The largest possible number after addition is

(1) 1308
(2) 808
(3) 1605
(4) 1560

36. Deepa goes to a post-office to post/mail letters and parcels. The postal rates depicted are as below:

**Letter Weighing:**
(i) 20 g or less - ₹ 5.00
(ii) Per every additional 20 g - ₹ 2.00

**Parcel Weighing:**
(i) 50 g or less - ₹ 5.00
(ii) For every additional 50 g - ₹ 3.00

Deepa wants to send two parcels weighing 250 g and 300 g respectively and two letters each to 20 g and 35 g respectively. How much postal charge does she have to pay?

(1) ₹ 49
(2) ₹ 41
(3) ₹ 48
(4) ₹ 39
37. A whole number is added to 50 and the same number is subtracted from 50. The sum of the resulting numbers is

(1) 100
(2) 25
(3) 50
(4) 0

38. Read the following Railway timings of New Delhi – Chennai Rajdhani express and answer the question:

<table>
<thead>
<tr>
<th>Station</th>
<th>Arrival</th>
<th>Departure</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Delhi</td>
<td></td>
<td>15:55</td>
</tr>
<tr>
<td>Bhopal</td>
<td>23:55</td>
<td>00:05</td>
</tr>
<tr>
<td>Nagpur</td>
<td>05:25</td>
<td>05:35</td>
</tr>
<tr>
<td>Vijaywada</td>
<td>14:15</td>
<td>14:30</td>
</tr>
<tr>
<td>Chennai</td>
<td>20:45</td>
<td>end</td>
</tr>
</tbody>
</table>

Which of the following statements is true?

(1) The duration of Journey from Bhopal to Chennai is 21 hr. 40 min.
(2) The duration of Journey from Bhopal to Vijaywada is 13 hr. 10 min.
(3) The duration of Journey from Nagpur to Chennai is 15 hr. 10 min.
(4) The duration of Journey from New Delhi to Nagpur is 11 hr. 30 min.
39. A beaker is $\frac{3}{7}$ filled with water. Another 16 L of water is needed to fill the beaker to its brim. What is the capacity of the beaker?

(1) 28 L
(2) 14 L
(3) 50 L
(4) 100 L

40. Which of the following represents descending order of numbers?

(1) 30.5, 3.05, 3.055, 3.50, 3.005, 0.355
(2) 3.05, 3.005, 3.50, 3.055, 30.5, 0.355
(3) 30.5, 3.50, 3.055, 3.05, 3.005, 0.355
(4) 30.5, 3.50, 3.05, 3.055, 3.005, 0.355

41. A shopkeeper mixed 5.3 kg of almonds, 2100 g of raisin, 2.2 kg of cashews and packed the mixture equally into two dozen packets. What is the weight to each packet?

(1) 500 g
(2) 300 g
(3) 400 g
(4) 450 g
42. Asha plans to save some money from household expenditure to buy a mobile phone. Every week she saves ₹ 50 on Monday, ₹ 100 on Wednesday and ₹ 80 on Friday and spends ₹ 60 from this on Sunday. How many weeks would she take to save enough to buy a mobile phone of ₹ 5,950?
   (1) 40
   (2) 25
   (3) 35
   (4) 30

43. What number am I?
   I am a 2 digit even number.
   I am common multiple of 3, 4, 6.
   I have total 9 factors.
   (1) 36
   (2) 48
   (3) 56
   (4) 24
44. If \((11011)_2 = (\_\_)_{10}\) then the number in the blank space is
   (1) 33
   (2) 22
   (3) 27
   (4) 30

45. The side of a square is 10 cm. How many times will the new perimeter become if the side of the square is doubled?
   (1) 2 times
   (2) Remains same
   (3) 4 times
   (4) 3 times

46. Which of the following letters have both horizontal and vertical lines of symmetry?
   (1) Y
   (2) A
   (3) X
   (4) C

44. यदि \((11011)_2 = (\_\_)_{10}\) है, तो रिक्त स्थान में संख्या है
   (1) 33
   (2) 22
   (3) 27
   (4) 30

45. एक वर्ग की भुजा 10 cm है। यदि वर्ग की भुजा दुगुनी कर दी जाए तो नया परिमार कितने गुणा हो जाएगा?
   (1) 2 गुणा
   (2) समान रहेगा।
   (3) 4 गुणा
   (4) 3 गुणा

46. निम्नलिखित में से किन अक्षरों में क्रैंटिज और ओर्थोग्राफिक सममिति दोनों की रेखाएं हैं?
   (1) Y
   (2) A
   (3) X
   (4) C
47. What is the correct sequence a teacher of Class-III needs to follow to explain the concept of ‘Quarter’ (1/4) to the students?

(A) Write symbol of Quarter on black board.

(B) Provide concrete material and divides into Quarters.

(C) Show pictures representing ‘Quarter’.

(1) (C), (A), (B)
(2) (A), (B), (C)
(3) (A), (C), (B)
(4) (B), (C), (A)

48. $72 \times 28 = 36 \times 4 \times \underline{\quad}$. The number in the blank is

(A) multiple of 7

(B) a prime number

(C) less than 10

(D) an even number

(E) factor of 56

Which of the following is correct?

(1) (A), (D), (E)
(2) (A), (B), (C)
(3) (A), (D), (B)
(4) (C), (D), (E)
49. How will you cater to the needs of visually challenged students of your classroom in an inclusive school?

(1) Provide them extra time for practise.
(2) Make them sit with high achievers
(3) Use alternate teaching-learning methods and resources.
(4) Send them to special educator.

50. A Class-III student perform multiplication of $16 \times 25$ as follows:

\[
16 \times 25 = 8 \times 2 \times 5 \times 5 \\
= 8 \times 5 \times 2 \times 5 \\
= 40 \times 10 \\
= 400
\]

Which property of multiplication has the student used in this question?

(1) Inverse multiplication law
(2) Distributive law
(3) Associative law
(4) Repeated addition
51. Which of the following is **not** a mathematical process?

(1) Estimation
(2) Transposition
(3) Visualisation
(4) Memorisation

52. Which of the following is **not** related to early number concept?

(1) Measurement
(2) Classification
(3) Class inclusion
(4) Conservation

53. Which of the following statements is true regarding ‘Numeral’ and ‘Number’?

(A) A numeral is a symbol used to represent number.

(B) Same number can be represented by different numerals.

(1) Both (A) and (B) are correct.
(2) Both (A) and (B) are incorrect.
(3) (A) is correct and (B) is incorrect.
(4) (B) is correct and (A) is incorrect.
54. Read the following word problems on addition:

A. There are 15 oranges in one basket and 17 oranges in another basket. How many oranges are there altogether?

B. The price of a mobile phone which is for ₹ 9,950 is increased by ₹ 375 after budget. What is the new price?

Which of the following statements is correct?

(1) Both represents augmentation structure of addition.

(2) ‘A’ represents augmentation structure of addition whereas ‘B’ represents aggregation structure of addition.

(3) ‘A’ represents ‘aggregation’ structure of addition whereas ‘B’ represents ‘augmentation’ structure of addition.

(4) Both represents aggregation structure of addition.
55. Identify the correct statement about the ability to conserve different physical quantities in 'measurement' as proposed by Piaget.

(1) Conservation of length is grasped before conservation of number.
(2) Conservation of weight is grasped before conservation of volume.
(3) Conservation of volume is grasped before conservation of mass.
(4) Conservation of weight is grasped before conservation of number.

56. A teacher gives the following task to the students of class-IV:

"Arrange 25 tiles in all possible rectangular arrays."

Which of the following mathematical concepts can be addressed through this task?

(1) Area, volume, length
(2) Volume, area, length
(3) Area, factors, perimeter
(4) Area, perimeter, volume
57. Which one of the following sets are Problem Solving Strategies in Mathematics?

(1) Memorisation, Guess & test, drawing
(2) Trial-error, drawing, memorisation
(3) Drawing, working back, rote learning
(4) Reasoning, using variable, look for a pattern

58. Van Hiele's levels refers to stages in the development of

(1) Fractions
(2) Number concept
(3) Place value
(4) Geometrical thinking

57. निम्नलिखित समुच्चयों में से कौन सा गणित में प्रश्न हल करने का कोशिश है?

(1) कठोरता करना, अनुमान लगाकर परीक्षण करना, चित्रांकन करना।
(2) प्रयत्न-उद्देश्य विधि, चित्रांकन करना, कठोरता करना।
(3) चित्रांकन करना, पीछे से हल करना, रट लेना।
(4) विवेचन करना, चर का प्रयोग करना, प्रतिरूप देखना।

58. वॉन हेले के स्तर जिस विकास की अवस्थाओं का संकेत करते हैं, वह है?

(1) मित्र
(2) संख्या की संकल्पना
(3) स्थानीय मान
(4) ज्यामितिय चिंतन।
59. As per the recommendation of NCF 2005, Primary School mathematics curriculum should

1. prepare children for advanced mathematics.
2. relate to children’s everyday experiences.
3. focus on procedural knowledge
4. provide rigour in mathematical concepts

60. Which of the following teaching-learning resources is best suited to explain the concept of multiplication of two decimal numbers say $0.3 \times 0.2 = 0.06$?

1. Graph paper
2. Dienes blocks
3. Taylor's abacus
4. Number chart

59. राष्ट्रीय पाद्यचर्या की रूपेखा (एन.सी.एफ.) 2005 की अनुसार प्रायोगिक विद्यालयों का गणित पाद्यक्रम

1. छात्रों को प्रगामी गणित के लिए तैयार करने वाला होना चाहिए।
2. छात्रों के प्रतिदिन के अनुभवों से संबंधित होना चाहिए।
3. कार्यविधिक ज्ञान पर केंद्रित होना चाहिए।
4. गणितीय संकलपनाओं में कठोरता देने वाला होना चाहिए।

60. दो दशमलव वाली संख्याओं के गुणन जैसे कि $0.3 \times 0.2 = 0.06$ की संकलपना की समझाने के लिए निम्नलिखित में से कौन सा शिक्षण-अधिग्रह साधन उचित है?

1. ग्राफ पेपर
2. डाइनेस ब्लॉक्स (Dienes blocks)
3. टेलर का गिनतारा (Taylor’s abacus)
4. संख्या चार्ट