परीक्षा पुस्तिका को भत्त तक न खोलें जब तक कहाँ न जाएगा।

पृष्ठाविशेष्यों के लिए निर्देश

1. ओएआरएम उपर पर इस परीक्षा पुस्तिका के अन्तर्गत रहें। जब आपको परीक्षा पुस्तिका कैप्चर करने को बताये जाएं, तब उत्तर पत्र पिकिंग करें।
2. परीक्षा की अधिकार 2 पहले दिन एवं परीक्षा में 150 प्रश्न होंगे। कोई अन्य विवरण नहीं है।
3. इस पृष्ठ पर विवरण अधिक नहीं दिए जाएं एवं उत्तर पत्र पर विवरण नहीं दिए जाएं क्योंकि उत्तर पत्र में बताया गया है।
4. इस पुस्तिका का संकेत U है। इस विनिमय का लाभ लें कि इस पुस्तिका का संकेत U है। इस पत्र का पहला विशेष नया संकेत है।
5. इस पृष्ठ पर पृष्ठाविशेष्यों में पृष्ठाविशेष्यों I, II, III, IV और V हैं।
6. प्रत्येक पृष्ठाविशेष्य का प्रत्येक परीक्षा पुस्तिका के संकेत का प्रयोग करें।
7. प्रत्येक पृष्ठाविशेष्य का प्रत्येक परीक्षा पुस्तिका के संकेत का प्रयोग करें।
8. परीक्षा पुस्तिका के लिए पृष्ठाविशेष्यों को प्रत्येक परीक्षा पुस्तिका के संकेत का प्रयोग करें।
9. प्रत्येक पृष्ठाविशेष्य का प्रत्येक परीक्षा पुस्तिका के संकेत का प्रयोग करें।
10. इस पृष्ठ का प्रत्येक परीक्षा पुस्तिका के संकेत का प्रयोग करें।

परीक्षा पुस्तिका का नाम (इस उपर रहें):
Name of the Candidate (in Capitals):
अनुरक्षण: (अंकों में):
Roll Number: in figures:
रूलेटों में:
in words:
परीक्षा केन्द्र (इसे अधिकतम रहें):
Centre of Examination (in Capitals):
परीक्षा के देखरेख:
Candidate’s Signature:
Facsimile signature stamp of
Centre Superintendent:

INSTRUCTIONS FOR CANDIDATES

1. The OMR Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars on Side-1 and Side-2 carefully with blue ball point pen only.
2. The test is of 2½ hours duration and consists of 150 questions. There is no negative marking.
3. Use Blue Ball Point Pen only for writing particulars on this page / marking responses in the Answer Sheet.
4. The CODE for this Booklet is U. Make sure that the CODE printed on Side-2 of the Answer Sheet is the same as that on this booklet. Also ensure that your Test Booklet No. and Answer Sheet No. are the same. In case of discrepancy, the candidate should immediately report the matter to the Invigilator for replacement of both the Test Booklet and the Answer Sheet.
5. This Test Booklet has five Parts, I, II, III, IV and V, consisting of 150 Objective Type Questions, each carrying 1 mark:
Part-I : Child Development and Pedagogy (Q. 1 to Q. 30)
Part-II : Mathematics and Science (Q. 31 to Q. 90)
Part-III : Social Studies/Social Science (Q. 91 to Q. 120)
Part-IV : Language-I (English/Hindi) (Q. 91 to Q. 120)
Part-V : Language-II (English/Hindi) (Q. 121 to Q. 150)
6. Candidates have to do questions 31 to 90 EITHER from Part-II (Mathematics and Science) OR from Part III (Social Studies/Social Science).
7. Part-IV contains 30 questions for Language-I and Part-V contains 30 questions for Language-II. In this Test Booklet, only questions pertaining to English and Hindi language have been given. In case the language(s) you have opted for is Language-I and/or Language-II is a language other than English or Hindi, please ask for a Test Booklet that contains questions on that language.
8. The languages answered must tally with the languages opted for in your Application Form.
9. Candidates are required to attempt questions in Part-V (Language-II) in a language other than the one chosen as Language-I (in Part-IV) from the list of languages.
10. Rough work should be done only in the space provided in the Test Booklet for the same.
11. The answers are to be recorded on the OMR Answer Sheet only. Mark your responses carefully. No whiter is allowed for changing answers.
PART - I / भाग - I

CHILD DEVELOPMENT AND PEDAGOGY / बाल विकास व शिक्षा शास्त्र

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

1. Do children acquire language because they are genetically predisposed to do so or because parents intensively teach them from an early age? This question essentially highlights:
   (1) the nature-nurture debate.
   (2) the discussion on development as a multi-factor ability.
   (3) whether development is a continuous process or discontinuous one?
   (4) the influence of cognition on development of language.

2. Development of the capacity for abstract scientific thinking is a characteristic of:
   (1) Sensori-motor stage
   (2) Pre-operational stage
   (3) Concrete operational stage
   (4) Formal operational stage

3. A child reasons - 'You do this for me and I'll do that for you.' In which stage of Kohlberg's moral reasoning would this child fall?
   (1) The instrumental purpose orientation
   (2) The punishment and obedience orientation
   (3) The 'good boy-good girl' orientation
   (4) The social-contract orientation

4. Progressive education:
   (1) reinforces the belief that the teacher has to be firm in her approach and in today's world children cannot be taught without using punishment.
   (2) lays strong emphasis on problem solving and critical thinking.
   (3) is based on the principles of conditioning and reinforcement.
   (4) is centred around textbooks since they are the only valid source of knowledge.

5. Questions encouraging students to voice their individual opinions on issues and reflections while giving reasons for the same, promote:
   (1) Convergent thinking
   (2) Recall of information
   (3) Standardized assessment of children
   (4) Analytical and critical thinking

निर्देश : सबसे अधिक विकल्प चुनकर निम्नलिखित प्रश्नों के उत्तर दीजिए:

1. बच्चों इसलिए भाषा अर्जित करते हैं, क्योंकि उनमें आनुवंशिक रूप से ऐसा करने की प्रौढ़प्रौढ़ता होती है या उनके मात-पिता प्रारंभिक अवस्था से ही उन्हें गहन रूप से सिखाते हैं? यह प्रश्न आवश्यक रूप से दर्शाता है?
   (1) प्रौढ़ता और पोषण पर बांस ।
   (2) शुद्ध-दुलक योग्यता के लिए भविष्य पर चर्चा ।
   (3) बच्चा विकास एक सतत प्रक्रिया है या एक असतत प्रक्रिया?
   (4) भाषा के विकास पर संज्ञान का प्रभाव ।

2. अमूल्य वैज्ञानिक चिन्तन के लिए क्षण का विकास निम्नलिखित अवस्थाओं में से किसकी एक विशेषता है?
   (1) संचारी-मिलक अवस्था
   (2) पूर्व-सीनियर अवस्था
   (3) मूल सीनियर अवस्था
   (4) अंतर्मेज़र सीनियर अवस्था

3. एक बच्चा तक प्रत्यक्ष करता है - 'आप यह मेरे लिए करें और मैं आपके लिए करूँ.' यह बच्चा कोलकर्म की सीकर्त तकनीक की किस अवस्था के अंतर्गत आएगा?
   (1) सहायक उद्देश्य अभिमूलकरण
   (2) दृष्टि और आसाधारण अभिमूलकरण
   (3) 'अचानक लगना नहीं लगता' अभिमूलकरण
   (4) सामाजिक-अनुबंध अभिमूलकरण

4. प्राचीनवर्दिक शिक्षा:
   (1) इस मार्ग पर विचार करती है कि शिक्षक को अपने उपाध्याय में तुझ हतास है और व्यक्तिगत भाषा में बिना दंड का भयावह किया बच्चों को पहचान नहीं या सठिता है?
   (2) समस्या समाधान और आलोचनात्मक चिन्तन पर अधिक बल देता है?
   (3) अनुशंसक और पुनर्व्याप्ति के सिद्धांत पर आधारित है?
   (4) पाठ-पुस्तकों पर आधारित है, क्योंकि बच्चे के एकमत वेश साथ है?

5. विभिन्न सूची और विषयों पर उनके लिए कारण प्रवृत्ति करते हैं एवं बच्चों को अपनी व्यक्तिगत रूप से व्यक्ति करने के लिए प्रतिस्थापित करने बाले प्रश्न किसको बढ़ावा देते हैं?
   (1) अभिमूलक चिन्तन
   (2) जानकारी का पुन:समेत
   (3) बच्चों का मानवीकृत आकाश
   (4) विश्लेषणात्मक और आलोचनात्मक चिन्तन
6. Which one of the following statements best sums up the relationship between development and learning?
   (1) Learning and development are synonymous terms.
   (2) Learning and development are inter-related in a complex manner.
   (3) Development is independent of learning.
   (4) Learning trails behind development.

7. Which one of these is NOT a principle of development?
   (1) Development is life-long.
   (2) Development is influenced by both heredity and environment.
   (3) Development is modifiable.
   (4) Development is governed and determined by culture alone.

8. A key feature of a child-centred classroom is that in which:
   (1) there’s coercive and psychological control of the teacher who determines the learning trajectory and the behaviour of the children.
   (2) the teacher lays down uniform ways of behaviour for children and gives them appropriate rewards when they do the same.
   (3) the teacher’s role is to present the knowledge to be learned and to assess the students on standard parameters.
   (4) the students with the teacher’s guidance are made responsible for constructing their own understanding.

9. Which one of the following statements is most appropriate about intelligence?
   (1) Intelligence is the ability to do well in school.
   (2) Intelligence is multi-dimensional having several aspects to it.
   (3) Intelligence can be reliably determined only by administering standardised IQ tests.
   (4) Intelligence is fundamentally neurological functioning, for example speed of processing, sensory discrimination etc.
10. **Gender bias refers to:**

   (1) acknowledgement of differences between boys and girls due to their physiology.
   (2) differential treatment of boys and girls based on expectations due to cultural attitudes.
   (3) genetic differences that exist between boys and girls.
   (4) perception of self as relatively feminine and masculine in characteristics.

11. **As an upper primary school teacher you have quite a few children who are 'first generation school goers' in your classroom. Which one of the following are you most likely to do?**

   (1) Tell the children that they do not have the capability to study further and they should now help their parents at work.
   (2) Call the parents and gently ask them to enrol their children for tuition.
   (3) Provide scaffolding and other kinds of support during classroom activities and for homework.
   (4) Give them homework of memorizing and copying the answers in their notebooks five times.

12. **Even children of the same age vary greatly in appearance, abilities, temperament, interests, aptitude amongst other things. What is the role of the school in this regard?**

   (1) Ensure that all children develop in the same manner.
   (2) Ensure that each child gets opportunities to develop as per her potential.
   (3) Lay down normative standards of assessment for children.
   (4) Ensure that the teacher uses standardized instruction and textbooks.
13. A teacher's most important role in an inclusive classroom is:
(1) to ensure that every child gets an opportunity to realize her potential.
(2) to plan for the class so that every child progresses at the same pace.
(3) to ensure that the teacher gives standard instructions to the class.
(4) to find out the occupations of parents of children so that the teacher knows what each child's future occupation would be.

14. How would you help children in your class to make changes in their concepts?
(1) By giving factual information.
(2) By giving children an opportunity to express their own understanding of the concepts.
(3) By dictating the information to the children and then asking them to memorize it.
(4) By punishing children if their concepts are wrong.

15. A certificate is given to children when they read a specific number of books. In the long run this strategy might not work since:
(1) a large number of certificates would have to be given when more children start reading.
(2) reading books would distract children from completing their homework.
(3) this might lead to children reading only for getting the certificates.
(4) the library would need to buy a lot of books.
16. Role of a teacher in a class is to:

(1) fill the students with her own knowledge and prepare them for examinations.
(2) transmit knowledge in a straight fashion and prepare students for right answers.
(3) follow the time-table strictly and stick to the course.
(4) provide authentic learning situations and facilitate independent thinking in students.

17. Which of the following statements is most appropriate about children making errors?

(1) Children commit errors since they do not have the capacity to think.
(2) Children’s errors are a window into how they think.
(3) To avoid making errors, children need to imitate the teacher.
(4) Children’s errors need to be taken seriously and they should be punished severely so that they do not repeat the mistakes.

18. Assessment is an integral part of teaching-learning process because:

(1) in today’s time marks are the only important thing in education.
(2) children need to be marked so that they know where they stand in comparison to their peers.
(3) assessment helps the teacher to understand children’s learning and serves as a feedback for her own teaching.
(4) assessment is the only way to ensure that teachers have taught and students have learnt.
19. "The curriculum must enable children to find their voices, nurture their curiosity – to do things, to ask questions and to pursue investigations, sharing and integrating their experiences with school knowledge – rather than their ability to reproduce textual knowledge." National Curriculum Framework 2005, p-13.

Against this backdrop, what should be the primary role of the teacher?

(1) to do the chapters of the textbooks sequentially.
(2) to ensure that the teacher asks good questions and the children write the answers in their notebooks.
(3) to give plenty of opportunities to children to share their own understanding and knowledge.
(4) to discard the experiences of the children and focus on the textbook.

20. To encourage children to put in efforts in their studies teachers need to:

(1) motivate the child
(2) scold the child
(3) control the child
(4) compare the child with others.

21. Which one of these statements in the context of emotions, learning and motivation is most appropriate?

(1) Emotions do not play any role in motivating us to learn.
(2) Learning something new is dependent on how good we are at that.
(3) Emotions need to be pushed aside to allow for learning to take place.
(4) Emotions are inextricably intertwined with motivation and learning.

22. Multiple Choice Questions assess the child's ability to:

(1) recognize the correct answer.
(2) recall the correct answer.
(3) construct the correct answer.
(4) explain the correct answer.
23. Process of socialization does NOT include:
   (1) Learning the customs and norms of a culture
   (2) Acquisition of skills
   (3) Acquiring values and beliefs
   (4) Genetic transmission

24. What term/phrase does Piaget use for ‘mental structures which are the building blocks of thinking’?
   (1) Schemas
   (2) Zones of development
   (3) Gene
   (4) Maturation blocks

25. According to Vygotsky why do children speak to themselves?
   (1) Children are egocentric.
   (2) Children use speech to guide their actions.
   (3) Children use their speech to attract the attention of adults to them.
   (4) Children are very talkative by nature.

26. Children with learning disabilities:
   (1) have retarded mental development.
   (2) have low IQ.
   (3) have confusion between letters and alphabets that look alike.
   (4) easily recognise and comprehend sight words.

27. What is Creativity?
   (1) Ability to identify or prepare original and divergent solutions to problems.
   (2) Creativity is best defined as an IQ of above 200.
   (3) A form of intelligence that refers to skills that depend on accumulated knowledge and experience.
   (4) A form of intelligence that depends heavily on information-processing skills including the speed of processing.

23. समाजीकरण की प्रक्रिया में शामिल नहीं हैः
   (1) एक संकृत रूपों की रीतियाँ और मानदंडों को सीखना
   (2) कोशिल्ल से शिक्षा
   (3) मूलतः और मूल्यस्तरों का अर्थन
   (4) अनुवांशिक संरचना

24. ‘मानसिक संरचनाएँ जो निर्माण के प्रक्रिया में प्रदर्शित हैं’ — इसके लिए पियाजे ने किस शब्दोत्तर का प्रयोग किया है?
   (1) रस्मिया (अवधारणा)
   (2) विकास के क्षेत्र
   (3) जीन
   (4) परिपक्व प्रवृत्ति

25. व्याख्यात्मक के अनुसार बच्चे खेल से क्यों बोलते हैं?
   (1) बच्चे आत्मकेंद्रित होते हैं।
   (2) बच्चे अपने कश्चि को देखा देने के लिए बोलते हैं।
   (3) बच्चे अपने प्रति व्यक्ति का भावना आकृति करने के लिए बोलते हैं।
   (4) बच्चे स्वभावों से बहुत बातचीत होते हैं।

26. अधिग्रहण अर्थात् बच्चों
   (1) बच्चों का मानसिक विकास में होता है।
   (2) बच्चों का निश्चित दृष्टिकोण बच्चों होता है।
   (3) बच्चों का एक साधारण दृष्टिकोण देने वालों तथा बच्चों में प्रभाव होता है।
   (4) बच्चे दृष्टिकोण (साइटिंग व्हाइट) को आचारण से पश्चात और समझते है।

27. सुधारणक्रम का क्या है?
   (1) समस्याओं के मौलिक और अपस्थार समस्याओं को पाए जाएँ तथा संयम करना की योग्यता।
   (2) सुधारणक्रम 200 से ऊपर की दुष्कर्णिक से सत्यापित निर्माण ढंग से परिवर्तित होता है।
   (3) बुद्धि का एक प्रकार जो उन कोशिल्ल से संबंधित है जो सीधी तौर पर गान और अनुवाद पर निर्भर होता है।
   (4) बुद्धि का एक प्रकार जो संसाधनों के गति को शामिल करते हुए सुधारणक्रम कोशिल्ल पर अनुच्छेदिक निर्माता होता है।
28. A lot of children in India, especially girls do household chores before coming to school and after going back from school. What do you think a teacher should do regarding homework in this context?

1. Ask the parents of the children to get tuition for completing the homework for their children.
2. She should give harsh punishment to the children who do not complete their homework.
3. The teacher should give homework that connects the learning at school to the children’s lives at home.
4. The teacher should ensure that the children wake up early in the morning and stay till late to complete their homework.

29. In an effective classroom:

1. The children fear the teacher since the teacher uses verbal and physical punishment.
2. The children don’t have any regard for the teacher and do as they please.
3. The children look up to the teacher for guidance and support to facilitate their learning.
4. The children are always anxious and kept on their toes since the teacher keeps on giving regular tests to assess their ability for recall.

30. Presenting disconnected chunks of knowledge would:

1. Make it difficult for the learners to gain conceptual understanding.
2. Make recall easier for the learners.
3. Help learners organize information on their own.
4. Make the task of the teacher difficult and that of the learners easy.

28. भारत में बहुत से बच्चे, बिशेषकर लड़कियां, विद्यालय में आने से पहले और विद्यालय से वापस जाने के बाद घर का काम करते हैं। आपके विचार से इस संदर्भ में एक शिक्षक को गृहकार्य के बारे में क्या करना चाहिए?

1. बच्चों के माता-पिता से उनके गृहकार्य को पूरा करने के लिए दूसरी तरफ़ लगाने के लिए कहिए।
2. उसे उन बच्चों को कठोर दंड देना चाहिए जो अपने गृहकार्य पूरा नहीं करते हैं।
3. शिक्षक को ऐसे गृहकार्य देना चाहिए जो विद्यालय में कराए गए अधिग्रह को बच्चों के घरेलू जीवन से जोड़ता है।
4. शिक्षक को सुनिश्चित करना चाहिए कि बच्चे अपना गृहकार्य पूरा करने के लिए सुनहरे दंडों और रैंड तक रखें।

29. एक प्रभावी कक्षा में:

1. बच्चे शिक्षक से डरते हैं, क्योंकि वह शिक्षक और शारीरिक दंड का प्रयोग करता है।
2. बच्चे शिक्षक का समान्य नहीं करते हैं और जैसे उन्हें अच्छा लगाता है वैसा ही करते हैं।
3. बच्चे अपने अधिग्रह को सुगम बनाने के लिए मार्गदर्शन एवं सहयोग के लिए शिक्षक से सहायता लेते हैं।
4. बच्चे हमेशा उत्सुक और तेज़र होते हैं, क्योंकि शिक्षक उनकी प्रतिभामार्ग योग्यता का आकलन करने के लिए नियमित रूप से परीक्षा लेता रहता है।

30. सात के एक बड़े अस्मृत भाग को प्रस्तुत करना:

1. शिक्षार्थियों के लिए अवधारणास्तिक समझ को प्राप्त करने को कठिन बनाएगा।
2. शिक्षार्थियों के लिए प्रतियोगता को आसान बनाएगा।
3. अपने तरीके से जानकारी को व्यवस्थित करने में शिक्षार्थियों की सहायता करेगा।
4. शिक्षक के कार्य को कठिन और शिक्षार्थियों के कार्य को आसान बनाएगा।
### PART - II / भाग - II

**MATHEMATICS AND SCIENCE / गणित व विज्ञान**

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

31. If \( a = 3^{129} \times 5^{128} \times 7^{22} \),
   \( b = 3^{128} \times 5^{129} \times 7^{21} \)
   \( c = 3^{127} \times 5^{129} \times 7^{23} \) and
   \( d = 3^{127} \times 5^{128} \times 7^{24} \), then
   **H.C.F. of \( a, b, c \) and \( d \) is :**
   
   (1) \( 3^{127} \times 5^{128} \times 7^{22} \)
   
   (2) \( 3^{128} \times 5^{128} \times 7^{21} \)
   
   (3) \( 3^{128} \times 5^{129} \times 7^{21} \)
   
   (4) \( 3^{127} \times 5^{128} \times 7^{21} \)

32. The value of \( \sqrt[3]{-2300} \times \sqrt[3]{5290} \) is :
   
   (1) \(-230\)
   
   (2) \(-529\)
   
   (3) \(-270\)
   
   (4) \(230\)

33. The value of \( \left(\frac{2^a}{5^b}\right)^{ac} \) where \( a = 2, b = 3 \) and \( c = 0 \), is :
   
   (1) \(1\)
   
   (2) \(0\)
   
   (3) \(-1\)
   
   (4) \(\frac{2}{5}\)

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**SPACE FOR ROUGH WORK / रफ कार्य के लिए जगह**
34. The value of \( \frac{44}{10} + \frac{404}{100} + \frac{444}{1000} + \frac{4}{10,000} \) is:
   (1) 12.8224
   (2) 12.8944
   (3) 12.8844
   (4) 12.8804

35. The smallest value of ‘y’ in the number 9y8071 so that it is divisible by 11 is:
   (1) 1
   (2) 0
   (3) 2
   (4) 3

36. \((14.96 \times 10^{10}) - (3.84 \times 10^{9})\) is expressed in standard form as:
   (1) 14921.6 \times 10^{9}
   (2) 14.9216 \times 10^{10}
   (3) 1492.16 \times 10^{8}
   (4) 1.49216 \times 10^{11}

37. The sum of mean, mode and median of the data 6, 3, 9, 5, 1, 2, 3, 6, 5, 1, 3 is:
   (1) 10
   (2) 11
   (3) 12
   (4) 13

34. \( \frac{4 + 44}{10} + \frac{404}{100} + \frac{444}{1000} + \frac{4}{10,000} \) का मान है:
   (1) 12.8224
   (2) 12.8944
   (3) 12.8844
   (4) 12.8804

35. संख्या 9y8071, 11 से विभाज्य होगी यदि ‘y’ का न्यूनतम मान है:
   (1) 1
   (2) 0
   (3) 2
   (4) 3

36. \((14.96 \times 10^{10}) - (3.84 \times 10^{9})\) का मानक रूप में निम्न द्वारा व्यक्त किया जाता है:
   (1) 14921.6 \times 10^{9}
   (2) 14.9216 \times 10^{10}
   (3) 1492.16 \times 10^{8}
   (4) 1.49216 \times 10^{11}

37. औसत 6, 3, 9, 5, 1, 2, 3, 6, 5, 1, 3 के माध्यम, बहुलक और माध्यम का योग है:
   (1) 10
   (2) 11
   (3) 12
   (4) 13
38. Natural numbers 4 to 15 are written on different slips (one number on one slip), kept in a box and mixed well. Renu picks up one slip from the box without looking into it. What is the probability that this slip bears a prime number?

   (1) $\frac{2}{5}$
   (2) $\frac{3}{11}$
   (3) $\frac{1}{3}$
   (4) $\frac{5}{12}$

39. A sum of money amounts to ₹ 4,818 after 3 years and ₹ 7,227 after 6 years on compound interest. The sum is:

   (1) ₹ 2,409
   (2) ₹ 2,490
   (3) ₹ 3,122
   (4) ₹ 3,212

40. If the weight of 18 sheets of paper is 50 grams, how many sheets of the same paper will weigh $3\frac{3}{4}$ kg?

   (1) 1350
   (2) 1314
   (3) 1386
   (4) 1836
41. If \( \frac{3x-2}{3} + \frac{2x+3}{2} = x + \frac{7}{6} \), then the value of \( \frac{5x-2}{4} \) is:

(1) \( \frac{1}{12} \)

(2) \(-\frac{1}{3}\)

(3) \( \frac{1}{4} \)

(4) \(-\frac{1}{12}\)

42. If \( 4x^2 + 12xy - 8x + 9y^2 - 12y = (ax + by) (ax + by - 4) \), then the value of \( a^2 + b^2 \) is:

(1) 5

(2) 10

(3) 13

(4) 25

43. In the product of \((5x + 2)\) and \((2x^2 - 3x + 5)\), the sum of the coefficients of \(x^2\) and \(x\) is:

(1) -9

(2) 8

(3) 9

(4) -8

41. यदि \( \frac{3x-2}{3} + \frac{2x+3}{2} = x + \frac{7}{6} \) है, तो \( \frac{5x-2}{4} \) का मान है:

(1) \( \frac{1}{12} \)

(2) \(-\frac{1}{3}\)

(3) \( \frac{1}{4} \)

(4) \(-\frac{1}{12}\)

42. यदि \( 4x^2 + 12xy - 8x + 9y^2 - 12y = (ax + by) (ax + by - 4) \) है, तब \( a^2 + b^2 \) का मान है:

(1) 5

(2) 10

(3) 13

(4) 25

43. \((5x + 2)\) और \((2x^2 - 3x + 5)\) के गुणनफल में \(x^2\) और \(x\) के गुणांकों का योग है:

(1) -9

(2) 8

(3) 9

(4) -8
44. The internal base of a rectangular box is 15 cm long and 12\(\frac{1}{2}\) cm wide and its height is 7\(\frac{1}{2}\) cm. The box is filled with cubes each of side 2\(\frac{1}{2}\) cm. The number of cubes will be:

(1) 45
(2) 60
(3) 90
(4) 120

45. The perimeter of a trapezium is 58 cm and sum of its non-parallel sides is 20 cm. If its area is 152 cm\(^2\), then the distance between the parallel sides, in cms, is:

(1) 6
(2) 8
(3) 9.8
(4) 15.2

46. The measure of each interior angle of a regular convex polygon is 156°. The number of sides of the polygon is:

(1) 15
(2) 12
(3) 10
(4) 8

44. किसी आयताकार बक्से का आंतरिक आधार
15 सेमी लंबा और 12\(\frac{1}{2}\) सेमी चौड़ा है और
tुड़की ऊँचाई 7\(\frac{1}{2}\) सेमी है। इस बक्से को 2\(\frac{1}{2}\)
सेमी भूजा वाले घनों से भरा जाता है। घनों की संख्या होगी:

(1) 45
(2) 60
(3) 90
(4) 120

45. किसी समलंब का परिमाप 58 सेमी है और
tुड़की असमांतर भुजाओं की लम्बाईयों का योग
20 सेमी है। यदि इसका क्षेत्रफल 152 सेमी\(^2\) हो,
tो समांतर भुजाओं के बीच की दूरी, सेमी में है:

(1) 6
(2) 8
(3) 9.8
(4) 15.2

46. किसी सम उस्तल बहुभुज के प्रत्येक अंत:कोण की
माप 156° है। बहुभुज की भुजाओं की संख्या है:

(1) 15
(2) 12
(3) 10
(4) 8
47. If the number of sides of a regular polygon is ‘n’, then the number of lines of symmetry is equal to:

(1) \( \frac{n}{2} \)
(2) \( n^2 \)
(3) \( 2n \)
(4) \( n \)

48. The sides of a triangle are 6.5 cm, 10 cm and \( x \) cm, where \( x \) is a positive number. What is the smallest possible value of \( x \) among the following?

(1) 4.5
(2) 2.8
(3) 3.5
(4) 4

49. Chhaya simplified the given rational number \( \frac{-25}{-30} = \frac{-5}{6} \).

This error can be considered as:

(1) careless error
(2) conceptual error
(3) procedural error
(4) error due to wrong interpretation of problem
50. ‘Data Handling’ at upper primary stage focuses on:
(1) data collection, organization and interpretation
(2) data interpretation only
(3) data organization only
(4) techniques of data collection

51. Which one of the following is not a Problem Solving Strategy in Mathematics?
(1) Trial and Error
(2) Drawing
(3) Solving backwards
(4) Rote learning

52. According to Piaget, when the child is at formal operational stage, it is appropriate to introduce:
(1) Ratio and Proportion
(2) Data handling
(3) Numbers
(4) Geometry

53. Read the following problem given in a textbook for class VII:
"A map is given with a scale of 2 cm = 1000 km. What is the actual distance between two places, in kms, if the distance on the map is 2.5 cm?"
This problem is:
(1) Interdisciplinary in nature
(2) Investigatory in nature
(3) based on higher order thinking skills
(4) to enhance problem solving skills.