6th All India RPS OLYMPIAD 2024-25

QUESTION PAPER

M.M:60   **Time: 60 minutes**

OFFLINE EXAMINATION (PHASE–II)

CLASS - VI

Name:_____ **Reg. No.** _____ **Mobile No.**_____

General Instructions:

1. Duration of the examination is 60 minutes. Question Paper contains 60 questions with maximum 60 marks.

2. There will be negative marking in Phase – II, i.e. ¼ mark will be deducted for each incorrect answer.

3. Use of gadgets is not allowed.

4. Students must abide by the instructions issued during the examination by the invigilator or the centre incharge.

5. Before attempting the question paper ensure that it contains all pages & no question is missing.

6. Immediately fill in the particulars on this page of the test booklet and OMR with BLACK ballpoint pen only. Use of pencil is strictly prohibited.

7. Fill and darken the bubbles completely. Do not put a tick or a cross.

8. Half –filled or over-filled bubbles will not be read by the software & liable to be rejected.

Correct Method

Wrong Method

Student's Signature

Invigilator's Signature

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English (15 marks)

Choose the most appropriate option:

Direction (Q1 & Q2): Identify the underlined word given in the sentence:

Q1. Somebody knocked on the door <u>but</u> nobody answered.

(a) Adverb

(b) Conjunction

(c) Adjective

(d) Preposition

Q2. If we finish our work <u>quickly</u>, we can go to play.

(a) Adjective   (b) Adverb   (c) Interjection   (d) Pronoun

Q3. It was _____ who offered her a job.

(a) I   (b) him   (c) her   (d) me

Q4. Identify the underlined pronoun in the sentence:-

   The cat opened the door <u>itself</u>.

(a) Reflexive Pronoun

(b) Emphatic Pronoun

(c) Personal Pronoun

(d) None of these

Q5. If you take three dresses, you _____ one dress free.

(a) are going to get   (b) are getting   (c) will get   (d) may get

Q6. The plants _____ before it rains.

(a) dried   (b) will have dried   (c) had dried   (d) dry

Q7. He came here _____ boat.

(a) on   (b) in   (c) of   (d) by

Q8. None _____ the brave deserves the fair.

(a) by   (b) from   (c) to   (d) but

Q9. Identify the type of verb used in the following sentence:

   The bank opens at 9 o'clock.

(a) Transitive verb

(b) Intransitive verb

(c) Auxiliary verb

(d) None of these

Q10. Identify the underlined kind of adjective in the sentence:
   We went to the theatre to watch a <u>Shakespearean</u> play.

(a) Adjective of quality

(b) Adjective of quantity

(c) Proper adjective

(d) Adjective of number

Q11. Sneha is _____ than most other students of the class.

   (a) taller   (b) tallest   (c) most taller   (d) more tall

Direction (Q12 & Q13) : Choose the correct Indirect Speech:

Q12. I said to her, "Has he been working since yesterday?"

   (a) I asked her if he had been working since the previous day?

   (b) I said her if he had been working since yesterday.

   (c) I asked her if he had been working since the previous day.

   (d) I asked her if he has been working since the previous day.

Q13. He said to me, "I shall write a novel."

   (a) He told me that he should write a novel.

   (b) He told me that he would write a novel.

   (c) He told to me that he would write a novel.

   (d) He told to me that he should write a novel.

Direction (Q14 & Q15): Identify the underlined 'Part of Speech' in the following sentences:

Q14. Take whatever you want, <u>only</u> let me go.

   (a) adverb   (b) preposition   (c) conjunction   (d) adjective

Q15. It <u>needs</u> to be done with care.

   (a) verb   (b) adverb   (c) noun   (d) adjective

Mathematics (15 Marks)

Q16. Find the smallest whole number that leaves a remainder of 1 when divided by all numbers from 1 to 10.

   (a) 2520   (b) 2521   (c) 2250   (d) 2251

Q17. Anuj received a container of fresh eggs. He sold $\frac{1}{6}$ of the eggs in the morning and sold 210 eggs in the afternoon. At the end of the day, he found that $\frac{1}{4}$ of the eggs were not sold. How many eggs did he receive in the beginning?

   (a) 468   (b) 460   (c) 360   (d) None of these

Q18. The LCM of two distinct natural numbers is 211. What is their HCF?

   (a) 211   (b) 11   (c) 21   (d) 1

Q19. Six rectangles each with a common base width of 2 cm, having lengths of 3 cm, 4 cm, 11 cm, 19 cm, 27 cm and 37 cm. What is the sum of the areas of the six rectangles?

  (a) 182 cm^2 (b) 202 cm^2 (c) 192 cm^2 (d) 206 cm^2

Q20. What must be added to the numbers 6, 10, 14 and 22 so that they are in proportion?

  (a) 2   (b) 4   (c) 6   (d) None of these

Q21. Hariom and Tejas are each told to calculate $16 - (4 - 7)$. Hariom gets the correct answer. Tejas ignores the parentheses and calculates $16 - 4 - 7$. If Hariom's answer is H and Tejas's answer is T, what is the value of $T - H$?

  (a) – 14   (b) 14   (c) – 10   (d) 10

Q22. If ₹510 be divided among A, B, C in such a way that A gets $\frac{2}{3}$ of what B gets, and B gets $\frac{1}{4}$ of what C gets, then their shares are respectively :

  (a) ₹120, ₹240, ₹150   (b) ₹60, ₹90, ₹360

  (c) ₹150, ₹300, ₹60   (d) ₹90, ₹60, ₹360

Q23. A rectangle and a square have the same perimeter. The length of the rectangle is twice its width, and the side of the square is 6 cm more than the width of the rectangle. Find the area of both the rectangle and the square.

  (a) 288 cm, 324 cm   (b) 288 cm^3, 324 cm^3

  (c) 288 cm^2, 334 cm^2 (d) None of these

Q24. A 2-digit number is such that the product of the digits plus the sum of the digits is equal to the number. What is the unit digit of the number?

  (a) 7   (b) 9   (c) 8   (d) 6

Q25. A person distributes his pens among four friends A, B, C and D in the ratio $\frac{1}{3} : \frac{1}{4} : \frac{1}{5} : \frac{1}{6}$. What is the minimum number of pens that the person should have?

  (a) 87   (b) 57   (c) 27   (d) None of these

Q26. Consider a shape composed of three squares of side lengths 3 cm, 4 cm, and 5 cm, all connected side-by-side in a straight line. Calculate the perimeter of this shape.

  (a) 24 cm   (b) 44 cm   (c) 34 cm   (d) 50 cm

Q27. A frequency table lists the number of students who scored in different score ranges in a Math test:

    50-59: 5 students

    60-69: 12 students

    70-79: 8 students

    80-89: 10 students

What is the probability that a randomly selected student scored between 60 and 79?

  (a) $\frac{7}{4}$ (b) $\frac{4}{7}$ (c) $\frac{3}{7}$ (d) none of these

Q28. The ratio of the boys to girls in a class is **2 : 3. If 20% of boys leave this class, then the new ratio of boys to girls is_____.**

(a) 8 : 15   (b) 8 : 3   (c) 3 : 7   (d) 4 : 7

Q29. Jayant has two identical wooden pyramids, each with a square base. He glues the two bases together to make a new bigger wooden shape. How many vertices are there in the new bigger shape?

(a) 8   (b) 10   (c) 6   (d) 4

Q30. 28 mango trees, 42 apple trees and 21 orange trees have to be planted in rows such that each row contains the same number of trees of one variety only. The minimum number of rows in which the above trees may be planted are _____.

(a) 13   (b) 11   (c) 9   (d) 10

Science (15 Marks)

Physics (5 Marks)

Q31. Imagine you are walking around a circular track. If you start at point A and walk halfway around the track to point B, which of the following statements about your displacement is true?

(a) Your displacement is the same as the distance you walked.

(b) Your displacement is half the distance you walked.

(c) Your displacement is zero because you returned to the starting point.

(d) Your displacement is the straight-line distance between point A and point B.

Q32. Choose the incorrect statement:

(a) Heat can destroy magnetic properties of a magnet.

(b) Magnets are made up of different materials and different shapes.

(c) There is a minimum attraction in the middle of a magnet.

(d) Horseshoe magnets are stored in pairs.

Q33. Which of the following scenarios demonstrate the concept of relative motion?

(a) A passenger sitting inside a moving bus observing the trees outside.

(b) A car moving on a straight road at a constant speed.

(c) An athlete running on a track with increasing speed.

(d) A pendulum swinging back and forth in a clock.

Q34. If you place a small object closer to a light source, how will the size of the shadow change and why?

(a) The shadow will become smaller because the object blocks less light.

(b) The shadow will become larger because the object blocks more light.

(c) The shadow will remain same regardless of the object's position.

(d) The shadow will disappear because the light source becomes too bright.

Q35. What happens when you connect a battery to a circuit with a bulb and the bulb does not light up? Which of the following could be a possible reason?

(a) The battery is too powerful for the bulb.

(b) The wires in the circuit are too long.

(c) There might be a break in the circuit or a loose connection.

(d) The switch is in the 'ON' position.

Chemistry (5 Marks)

Q36. A recycling centre receives a mixed load of paper, plastic, glass, and metal. Which material should be sorted first and why?

(a) Glass, because it is the heaviest.

(b) Plastic, because it is the most commonly used.

(c) Paper, because it is often the least dense and easy to handle.

(d) Metal, because it is valuable.

Q37. Which of the following statements is correct?

(a) Decantation can be used to separate a mixture of oil and water.

(b) Filtration is used to separate sugar from water.

(c) Evaporation is used to separate a mixture of sand and iron filings.

(d) Sieving is used to separate salt from water.

Q38. Which of the following best describes the formation of malachite?

(a) A shiny silver layer.   (b) A hard, smooth surface on silver.

(c) A flaky, reddish-brown substance on iron.   (d) A greenish colour on copper.

Q39. If a student wants to separate a mixture of sand, salt, and iron filings, which sequence of methods would provide the most efficient separation?

(a) Evaporation → Filtration → Magnetic separation

(b) Magnetic separation → Filtration → Evaporation

(c) Filtration → Magnetic separation → Evaporation

(d) Handpicking → Magnetic separation → Filtration

Q40. When air is heated, what happens to its density?

(a) It increases   (b) It decreases

(c) It remains the same   (d) It fluctuates

Biology (5 Marks)

Q41. Which of the following is a characteristic of herbaceous plants?

(a) They have a hard, woody stem.   (b) They usually live for several years.

(c) They have a soft, green stem.   (d) They do not produce flowers.

Q42. Which of the following bones is a part of the human arm?

(a) Femur   (b) Humerus   (c) Tibia   (d) Cranium

Q43. What is the role of dietary fat in the absorption of vitamins?

(a) It helps to digest carbohydrates.

(b) It enhances the flavour of food.

(c) It aids in the absorption of fat-soluble vitamins (A, D, E, K).

(d) It replaces carbohydrates in the diet.

Q44. What is the primary role of phloem in a plant?

(a) To absorb sunlight.

(b) To conduct photosynthesis.

(c) To transport sugars and organic substances produced during photosynthesis.

(d) To store water.

Q45. What type of fats should be limited in the diet to reduce the risk of heart disease?

(a) Unsaturated fats   (b) Saturated fats

(c) Omega-3 fatty acids   (d) All of these

Aptitude (15 Marks)

Q46. In the following question, select the related letters from the given alternatives.

ACI : 169 :: ? : 36

(a) DET   (b) BEB   (c) CAI   (d) ABC

Q47. Ram is to the South-East of Mukesh, Shyam is to the East of Mukesh and North-East of Ram. If Suresh is to the North of Ram and North-West of Shyam. In which direction of Mukesh is Suresh located?

(a) North – West   (b) South – West   (c) North – East   (d) South – East

Q48. A clock is set right at 4 a.m. The clock gains 14 minutes in 24 hrs. What time will the clock show when the true time is 4 p.m. on the following day?

(a) 4 : 21 a.m.   (b) 4 : 07 p.m.   (c) 3 : 39 p.m.   (d) None of these

Q49. Choose the odd one out.

(a) KQ14   (b) AY13   (c) MR11   (d) GW15

Q50. In a certain code language 'EXAMINATION' is coded as '56149512965'. How will 'MOBILITY' be coded as in that code language?

(a) 46293927   (b) 12250623   (c) 42962397   (d) 35225276

Q51. Find the missing number in the series given below:

4, 18, ?, 100, 180, 294

(a) 32   (b) 42   (c) 48   (d) 40

Q52. P's mother is Q's daughter. P's maternal aunt is R and Q's sister is S. How is 'S' related to 'R'?

(a) Aunt   (b) Sister   (c) Niece   (d) Mother

Q53. How would the word 'PIMENTO' be written if each of its consonants is substituted by a letter third to its right in the English alphabet and each of its vowels is substituted by the fourth consonant to its right in the English alphabet?

(a) SMPIQWR   (b) SMPJQWS   (c) SMPJQWR   (d) None of these

Q54. Complete the series:

4/12/95, 1/1/96, 29/1/96, 26/2/96, ?

(a) 24/3/96   (b) 25/3/96   (c) 26/3/96   (d) 27/3/96

Q55. A girl leaves from her house. She first walks 30 m in the North-West direction and then 30 m in the South-West direction. Next, she walks 30 m in the South-East direction. Finally, she turns towards her house. In which direction is she moving?

(a) North-West   (b) North-East   (c) South-East   (d) South-West

Q56. Pointing to a photograph, a man said, "I have no brother or sister but that man's father is my father's son". Whose photograph was it?

(a) His son's   (b) His own   (c) His father's   (d) None of these

Q57. If the Republic Day of India in 1980 falls on Saturday, 'P' was born on March 3, 1980 and 'T' is older to 'P' by four days, then 'T's' birthday falls on _____.

(a) Thursday   (b) Friday   (c) Wednesday   (d) None of these

Q58. Choose the correct option:

47 : 65 : : 95 : ?

(a) 111   (b) 99   (c) 106   (d) 127

Q59. In the following question, which number will complete the given pattern, when placed at the sign of interrogation (?) ?

2	9	11	7
8	5	13	-3
7	3	?	-4
6	4	10	?

(a) 10 and (-2)   (b) 3 and (-2)   (c) 10 and 2   (d) None of these

Q60. Select the Venn diagram that best illustrates the relationship between the following classes: Parents, Rich Persons, Farmers

(i)   (ii)   (iii)   (iv)
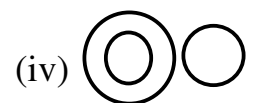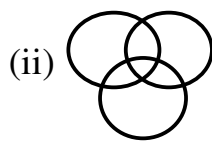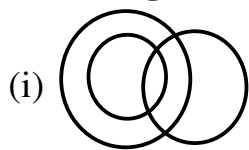
(a) B   (b) A   (c) D   (d) C

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