



7th All India RPS



OL MPIAD

Online & Offline Mega Event

QUESTION PAPER (PHASE - II)

M.M:60

Time: 60 minutes

OFFLINE EXAMINATION (PHASE-II)

CLASS - VIII

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. $\frac{1}{4}$ 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 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



Student's Signature

Wrong Method



Invigilator's Signature

SPACE FOR ROUGH WORK

English (15 Marks)

Choose the most appropriate option:

Q1. Identify the part of the sentence that contains an error:

Neither of the two brothers, who lives in Delhi and who has been preparing for the UPSC exam since 2019, have submitted their final application forms yet.

- (A) Neither of the two brothers
- (B) who lives in Delhi
- (C) who has been preparing for the UPSC exam since 2019
- (D) have submitted their final application forms yet

Q2. Which part has the error?

She is senior than me in this office, but she often takes my suggestions seriously.

- (A) than me in this office
- (B) She is senior
- (C) but she often takes
- (D) my suggestions seriously

Q3. Choose the sentence with the correct usage of article:

- (A) The wisdom is better than strength.
- (B) Wisdom is better than strength.
- (C) A wisdom is better than strength.
- (D) Wisdoms are better than strength.

Q4. Choose the grammatically correct sentence:

- (A) He gave me many informations about the exam.
- (B) He gave me informations about the exam.
- (C) He gave me a piece of information about the exam.
- (D) He gave me several informations about the exam.

Q5. Choose the correct passive voice of the following:

The teacher made the students write an essay.

- (A) The students were made to write an essay by the teacher.
- (B) An essay was made to be written by the students.
- (C) The students were made write an essay by the teacher.
- (D) The students were asked writing an essay by the teacher.

Q6. Choose the option with the correct usage of verb forms:-

By the time her parents arrived, Priya _____ alone in the park for over an hour.

- (A) had sat (B) had been sitting
(C) was sitting (D) has been sitting

Q7. Which sentence is grammatically correct?

- (A) He is working in this company since 2015.
(B) He was working in this company since 2015.
(C) He has been working in this company since 2015.
(D) He have been working in this company since 2015.

Q8. Choose the correct option:

Had I known her number, I _____ you.

- (A) will call (B) would call
(C) had called (D) would have called

Q9. Choose the option with the correct usage of verb:

- (A) Either of the two girls have brought their notebooks.
(B) Neither of the players was confident of his performance.
(C) Neither of the men were willing to give their opinion.
(D) Either of the two candidates are suitable for the job.

Q10. Choose the antonym of the word 'Belligerent':

- (A) Hostile (B) Aggressive (C) Amiable (D) Quarrelsome

Q11. Choose the synonym of the word 'Ubiquitous':

- (A) Rare (B) Omnipresent (C) Temporary (D) Singular

Q12. Identify the sentence free from punctuation error:

- (A) Its raining heavily, we should take an umbrella.
(B) It's raining heavily: we should take an umbrella.
(C) It's raining heavily we should take an umbrella.
(D) It's raining heavily; we should take an umbrella.

Q13. Choose the correct verb form:

Hardly had he reached the station when the train _____.

- (A) left (B) had left (C) was leaving (D) leaves

Q14. Which sentence is grammatically correct?

- (A) Few students who attended the lecture were rewarded.
 (B) The few students who attended the lecture were rewarded.
 (C) A few students who attended the lecture was rewarded.
 (D) Little students who attended the lecture were rewarded.

Q15. Which of the following sentences does not follow the correct usage of pronouns?

- (A) Let you and me finish the job.
 (B) Please let Rocky and me go to Switzerland.
 (C) Your friend has done enough bad things to my father and me.
 (D) I don't think there is a difference between you and I.

Mathematics (15 Marks)

Q16. Mitali is 12 years older than Babita. After 10 years, the age of Chinky will be equal to the average of Mitali and Babita's ages at that time. What is the difference between Mitali and Chinky's current ages?

- (A) 4 years (B) 3 years (C) 5 years (D) 6 years

Q17. What is the value of x if $\frac{x-n}{m+n} = \frac{x+n}{m-n}$?

- (A) m (B) n (C) - m (D) - n

Q18. The sum of length, breadth and height of a cuboid is 21 cm and the length of its diagonal is 13 cm. Then the total surface area of the cuboid is:

- (A) 272 cm² (B) 240 cm² (C) 314 cm² (D) 366 cm²

Q19. A solid cube of side 8 cm is dropped into a rectangular container of length 16 cm, breadth 8 cm and height 15 cm which is partly filled with water. If the cube is completely submerged, then the rise of water level (in cm) is:

- (A) 6 (B) 4 (C) 2 (D) 5

Q20. If $x = \frac{5^2 + 6^2 + 7^2 + 8^2 + 9^2 + 10^2}{2(2 + \sqrt{3}) - (2\sqrt{3} + 3)}$, find the value of square root of $(x/5 + 10)$.

- (A) 9 (B) 25 (C) 5 (D) 6

Q21. A bag contains only red, green and white balls. The probability of selecting a red ball from the bag at random is $\frac{1}{3}$ and that of selecting a white ball at random is $\frac{1}{2}$. If the bag contains 9 green balls, the total number of balls in the bag is:

- (A) 45 (B) 48 (C) 42 (D) 54

Q22. Solve for x and match the following:

Column-A		Column-B	
P	$\frac{(243)^{0.13} \times (243)^{0.07}}{(7)^{0.25} \times (49)^{0.075} \times (343)^{0.2}} = \left(\frac{3}{7}\right)^x$	(i)	$x = \frac{1}{2}$
Q	$(256)^{0.16} \times (256)^{0.09} = 2^x$	(ii)	$x = 1$
R	$\frac{2^{x-1} \cdot 4^{2x+1}}{8^{x-1}} = 32$	(iii)	$x = 2$
S	$3^x - 3^{x-1} = 54$	(iv)	$x = 4$

- | | P | Q | R | S |
|-----|-------|-------|-------|------|
| (A) | (i) | (ii) | (iii) | (iv) |
| (B) | (ii) | (iii) | (i) | (iv) |
| (C) | (iii) | (i) | (ii) | (iv) |
| (D) | (ii) | (i) | (iii) | (iv) |

Q23. If $a + b + c = 0$, then $x^{a^2b^{-1}c^{-1}} \cdot x^{a^{-1}b^2c^{-1}} \cdot x^{a^{-1}b^{-1}c^2} = \underline{\hspace{2cm}}$

- (A) $x^{a^2b^2c^2}$ (B) $x^{1/a^2b^2c^2}$ (C) $x^{1/2}$ (D) x^3

Q24. If $x = \frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$ and $y = \frac{\sqrt{3} - \sqrt{2}}{\sqrt{3} + \sqrt{2}}$, then find the value of $x^2 + y^2$.

- (A) 32 (B) 98 (C) 40 (D) 0

Q25. If $2p^3 - xp^2 - yp - 14$ has $(p + 2)$ as a factor and leaves a remainder -26 when divided by $(p + 3)$, find the values of 'x' and 'y'.

- (A) $x = 1, y = 17$ (B) $x = -1, y = -17$
 (C) $x = 1, y = -17$ (D) $x = -1, y = 17$

Q26. If $\left(a + \frac{1}{a}\right)^2 = b$ then $a^3 + \frac{1}{a^3}$ is equal to

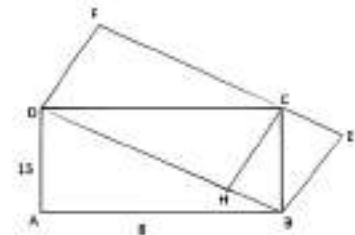
- (A) b^3 (B) $b^{\frac{3}{2}}$ (C) $b^{3/2} + 3b^{1/2}$ (D) $b^{3/2} - 3b^{1/2}$

Q27. If $\left[\frac{4^{m + \frac{1}{4}} \cdot \sqrt{2 \cdot 2^m}}{2 \times \sqrt{2^{-m}}} \right]^{\frac{1}{m}} = 2^k$, then find the value of $(k^2 - 2)$.

- (A) 3 (B) 2 (C) 7 (D) 4

Q28. Two rectangles ABCD and DBEF are as shown in the figure. The area of rectangle DBEF in square units is (CH perpendicular to DB)

- (A) 90 (B) 160
 (C) 140 (D) 120



Q29. Four dices are rolled. The number of possible outcomes in which at least one die show 2 is _____.

- (A) 671 (B) 1296 (C) 625 (D) None of these

Q30. One factor of $4(x + y)^2 - 28(x^2 - y^2) + 49(x - y)^2$ is _____.

- (A) $[9(x + y) - 5(x - y)]$ (B) $(9y - 5x)$
 (C) $(4x - 9y)$ (D) $(9y + 5x)$

Chemistry (5 Marks)

Q36. If Bhujho opened the air – hole of a Bunsen burner fully and lighted the burner, he will get _____.

- (A) a luminous flame which is orange – yellow in colour.
- (B) a non – luminous flame which is pale blue in colour.
- (C) a flame that strikes back which is thin blue or green – yellow in colour.
- (D) a smoky flame which gives off a lot of soot.

Q37. Which of the following substances is added to LPG to give it a peculiar smell ?

- (A) Ethyl alcohol
- (B) Tetraethyl lead
- (C) Ethyl mercaptan
- (D) All of these

Q38. If 10 kg of a fuel X produces 1, 60,000 J of heat on complete combustion, then the calorific value of X is _____.

- (A) 1600 J/kg
- (B) 160 kJ/kg
- (C) 1.6 kJ/kg
- (D) 16 kJ/kg

Q39. In the electrolysis of copper sulphate solution using copper electrodes, what happens at the anode?

- (A) Copper ions are deposited
- (B) Hydrogen is released
- (C) Oxygen bubbles are formed
- (D) Copper metal dissolves into solution as Cu^{2+} ions

Q40. In electrolysis, mass of metal deposited is directly proportional to:

- (A) Voltage
- (B) Current
- (C) Time \times Current
- (D) Resistance

Biology (5 Marks)

Q41. Which of the following antibiotics was extensively used to treat American soldiers wounded in World War II?

- (A) Neomycin
- (B) Bacitracin
- (C) Chloramphenicol
- (D) Penicillin

Q42. Which of the following is called '4S' gland?

- (A) Pancreas (B) Adrenal (C) Thyroid (D) Parathyroid

Q43. Which of the following statements regarding viruses are correct?

- (i) These are cellular, infectious, nucleoprotein particles.
 (ii) They can be grown in culture medium.
 (iii) Genetic material is either DNA or RNA, but never both.
 (iv) They can be crystallized.

- (A) (i) and (ii) (B) (ii) and (iii)
 (C) (iii) and (iv) (D) (i), (ii), (iii) and (iv)

Q44. AIDS is widely diagnosed by:

- (A) Widal test (B) ELISA (C) PCR (D) Chromatography

Q45. When does ovulation in the human female normally takes place during the menstrual cycle?

- (A) At the mid secretory phase
 (B) Just before the end of the secretory phase
 (C) At the beginning of the proliferative phase
 (D) At the end of proliferative phase

Aptitude (15 Marks)

Q46. If only the first half of the given alphabet is reversed how many letters will be there between K and R ?

- (A) 6 (B) 10 (C) 14 (D) 16

Q47. In a certain code Language 'CRISIS' is coded as '40 – 13 – 58' and 'EDITOR' is coded as '09–10–19'. Then how will 'LATTER' be coded in that language ?

- (A) 14 – 68 – 48 (B) 68 – 58 – 41
 (C) 48 – 14 – 68 (D) 41 – 58 – 86

Q48. What was the day on 1st January 2020?

- (A) Wednesday (B) Friday (C) Thursday (D) Sunday

Q49. Imagine that you are walking towards south. After sometime you turn left. Then again you turn left. After that you turn right and once again turn to the right. In which Direction you are walking now?

- (A) East (B) West (C) South (D) North

Q50. In a code language, 'SOLID' is written 'WPSLPIMFHA'. What does the code-word 'ATEXXQIBVO' refer to ?

- (A) WAGER (B) WATER (C) EAGER (D) WAFER

Q51. Find the next number in the given series:

16, 23, 33, 51, 72, 111, ?

- (A) 426 (B) 324 (C) 148 (D) 242

Q52. Find the next number in the given series:

1, 6, 36, 240, 1960, ?

- (A) 19660 (B) 19600 (C) 36800 (D) 35840

Q53. In the following question, select the related number of pairs from the given alternatives :

11 : 121 : 110 :: 15 : 225 : 210 :: ?

- (A) 9 : 81 : 70 (B) 19 : 361 : 342
(C) 17 : 288 : 272 (D) 16 : 225 : 239

Q54. At what time between 9 and 10 will the hands of a clock be together ?

- (A) 45 minutes past 9 (B) 50 minutes past 0
(C) $49\frac{1}{11}$ minutes past 9 (D) $48\frac{2}{11}$ minutes past 9

Q55. At what time between 5:30 and 6 will the hands of a clock be at Right angle ?

- (A) 40 min past 5 (B) 45 min past 5
(C) $10\frac{10}{11}$ min past 5 (D) $43\frac{7}{11}$ min past 5

Q56. The minute-hand of a clock overtakes the hour hand at intervals of 63 minutes of correct time. How much in a day does the clock gain or lose ?

- (A) $56\frac{8}{77}$ min gain (B) $56\frac{8}{77}$ min lose
(C) $57\frac{8}{77}$ min gain (D) $57\frac{8}{77}$ min lose

Q57. How many times does 29th date comes in 400 years ?

- (A) 96 (B) 97 (C) 4800 (D) 4497

Q58. If it was Friday on 15 August 2005, then what day was on 29 April 2005?

- (A) Thursday (B) Monday (C) Friday (D) Tuesday

Q59. Which of the following days can never be the last day of any century?

- (A) Sunday (B) Monday (C) Tuesday (D) Wednesday

Q60. P is brother of Q, R is mother of P, S is father of R. What is S of Q?

- (A) Grandson (B) Nephew
(C) Maternal Grandfather (D) Uncle

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