



7th All India RPS



OL  **MPIOAD**

Online & Offline Mega Event

QUESTION PAPER (PHASE – II)

M.M:60

Time: 60 minutes

OFFLINE EXAMINATION (PHASE-II)

CLASS - VII

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)

Q1. Choose the correct sentence from the following sentences:

- (A) I run faster than him. (B) I run faster than himself.
 (C) I run faster than he. (D) None of these.

Q2. The _____ of women is possible only through giving them financial _____.

- (A) empowered, freedom (B) empowerment, freedom
 (C) empowerment, freeness (D) none of these

Q3. She lives at the _____ end of the lane.

- (A) far (B) further (C) farther (D) more far

Q4. Churchill was _____ great orator and _____ politician of his time.

- (A) a, a (B) a, x (C) a, the (D) the, a

Q5. A soldier is taught never to fight cowardly. The underlined is a/ an

- (A) Noun (B) Pronoun (C) Adjective (D) Adverb

Q6. Seldom _____ come to my place.

- (A) does he (B) he (C) he does (D) doesn't he

Q7. Don't touch this switch. Select one sentence which expresses the same sentence in passive voice:

- (A) This switch does not be touched. (B) This switch need not touch.
 (C) You are prohibited to touch the switch. (D) Both b and c

Q8. One can't gather grapes from thistles.

- (A) Thistles cannot be gathered from grapes.
 (B) Grapes can't be gathered from thistles.
 (C) Thistles and grapes couldn't be gathered by one.
 (D) Grapes can't be gathered by them.

Q9. This T. V serial _____ on for three years.

- (A) is going (B) goes
 (C) have been going (D) has been going

Q10. When _____ the money and where did they hide it?

- (A) they stole (B) did they stole
(C) did they steal (D) will they steal

Q11. Being a sincere friend, he will not leave you in the lurch.

The type of sentence is:

- (A) Complex (B) Compound (C) Simple (D) Both a and b

Q12. She passed the exam although he didn't study much.

- (A) simple (B) compound (C) complex (D) both b and c

Directions (Q13 & Q14):- Out of four alternatives, choose the one which best expresses the meaning of the given word.

Q13. Prognosis

- (A) Diagnosis (B) Forecast (C) Preface (D) identity

Q14. Lurid

- (A) Happy (B) Abundant (C) Joy (D) Shocking

Q15. Choose the correctly punctuated sentence from the options given below.

- (A) Let's eat Grandma ! (B) Let's eat, Grandma !
(C) Lets eat, Grandma! (D) Lets eat Grandma !

Mathematics (15 Marks)

Q16. If $2^{-m} \times \frac{1}{2^m} = \frac{1}{4}$, then $\frac{1}{14} \left\{ (4^m)^{1/2} + \left(\frac{1}{5^m}\right)^{-1} \right\}$

- (A) $\frac{1}{2}$ (B) 2 (C) 4 (D) $-\frac{1}{4}$

Q17. If $4^x - 4^{x-1} = 24$ then $(2x)^x$

- (A) $5\sqrt{5}$ (B) $\sqrt{5}$ (C) $25\sqrt{5}$ (D) 125

Q18. The value of $\frac{1}{8}$ of $\left(\frac{3\frac{1}{2} + 1\frac{1}{2} \text{ of } 5\frac{1}{2}}{2\frac{1}{2} + 1\frac{1}{2} \text{ of } 3\frac{1}{2}}\right)$ is

- (A) $\frac{56}{99}$ (B) $\frac{56}{1023}$ (C) $\frac{7}{1023}$ (D) $\frac{182}{31}$

Q19. If $47.2506 = 4A + \frac{7}{B} + 2C + \frac{5}{D} + 6E$, find the value of $5A + 3B + 6C + D + 3E$ is

- (A) 53.6003 (B) 53.603 (C) 153.6003 (D) 213.0003

Q20. If the observations 20, 22, 23, 25, (x+1), (x+3), 36, 38, 39 & 41 have median 30. Then value of x is:

- (A) 28 (B) 29 (C) 30 (D) 32

Q21. I am a number. Tell my identity. Take me twelve times over and add a fifty! To reach a double century, you still need thirty! "Who am I?"

- (A) 10 (B) 12 (C) 16 (D) 24

Q22. Simplify

i) If the measure of two supplementary angles are $6x+20$ & $10x$, then the value of x is:

ii) The complement angle of $\frac{3}{5} \times 45^\circ$ is:

iii) If two complementary angles are in the ratio 1:5 then smallest angle is:

	(i)	(ii)	(iii)
(A)	10°	63°	15°
(B)	20°	27°	15°
(C)	20°	63°	10°
(D)	10°	27°	30°

Q23. If $6\angle A = 10\angle B = 12\angle C = 360^\circ$ Where $\frac{1}{2}\angle A + 2\frac{3}{4}\angle B + 2\frac{2}{5}\angle C + 1\frac{1}{2}\angle x = 360^\circ$, then value of x is:

- (A) 102° (B) 105° (C) 106° (D) 104°

Q24. In a triangle, the internal bisector of an angle bisects the opposite side. Find the nature of the triangle.

- (A) Right angled (B) Isosceles
(C) Scalene (D) None of these

Q25. If $x = (-23) + 22 + (-23) + 22 + \dots(40 \text{ terms})$ & $y = 11 + (-10) + 11 + (-10) + \dots(20 \text{ terms})$, then y-x is:

- (A) 40 (B) 10 (C) 20 (D) 30

Q26. If the mean of three numbers a, b & c is 3 then $\sqrt[3]{(7^{a+b-c})(7^{b+c-a})(7^{c+a-b})}$ equals:

- (A) $7^{1/3}$ (B) $7^{2/3}$ (C) 7^2 (D) 7^3

Q27. If $\frac{2x}{1+\frac{1}{1+\frac{x}{1-x}}} = 1$. Find the value of $\frac{x+1}{4x-2}$.

- (A) $\frac{5}{4}$ (B) $\frac{3}{2}$ (C) $\frac{3}{4}$ (D) $\frac{5}{2}$

Q28. If two third of three fourth of a number added to three fourth of the fourth fifth of the number is x times the number, then the value of x is:

- (A) $\frac{11}{10}$ (B) $\frac{12}{11}$ (C) $\frac{10}{11}$ (D) $\frac{9}{11}$

Q29. The sum of two angles of a triangle is half of a right angle and their difference is 1° more than $\frac{2}{5}$ th of a right angle, then smallest angle of the triangle is:

- (A) 14° (B) 41° (C) 4° (D) 3°

Q30. $\frac{x^{-1}-y^{-1}}{z} + \frac{y^{-1}-z^{-1}}{x} + \frac{z^{-1}-x^{-1}}{y} = ?$

- (A) 1 (B) -1 (C) 0 (D) 2

Science (15 Marks) Phy. + Chem. + Bio.
Physics (5 Marks)

Q31. A car, starting from rest, accelerates at the rate 'f' through a distance 'S', then continues at constant speed for time 't' and then decelerates at the rate 'f/2' to come to rest. If the total distance traversed is 15 S, then:

- (A) $S = \frac{ft^2}{72}$ (B) $S = \frac{ft^2}{4}$ (C) $S = \frac{ft^2}{6}$ (D) $S = \frac{ft^2}{2}$

Q32. A stone dropped from a building of height h reaches the ground after t seconds. From the same building if two stones are thrown (one upwards and the other downwards) with the same velocity u and they reach the ground after t_1 and t_2 seconds respectively, then the time interval t is

- (A) $t = t_1 - t_2$ (B) $t = \frac{t_1 + t_2}{2}$ (C) $t = \sqrt{t_1 t_2}$ (D) $t = \sqrt{t_1^2 - t_2^2}$

Q33. A 500 W heater is designed to operate at 200 V potential difference. If it is connected across 160 V line, the heat it will produce in 20 minutes is:

- (A) 384 kJ (B) 483 kJ (C) 843 kJ (D) 348 kJ

Q34. The resistance of a wire is 5Ω . Its new resistance in ohm if stretched to 5 times of its original length will be:

- (A) 125 (B) 5 (C) 25 (D) 625

Q35. The quantities of heat required to raise the temperatures of two copper spheres of radii r_1 and r_2 ($r_1 = 1.5 r_2$) through 1 K are in the ratio of :

- (A) $\frac{27}{8}$ (B) $\frac{9}{4}$ (C) $\frac{3}{2}$ (D) 1

Chemistry (5 Marks)

Q36. Select the incorrect match/matches:

- | | |
|---|---|
| <p>(i) Marble – Calcium carbonate</p> <p>(iii) Calamine solution – Zinc hydroxide</p> | <p>(ii) Soda ash – Sodium bicarbonate</p> <p>(iv) Slaked lime – Calcium oxide</p> |
|---|---|
- (A) (i) and (ii) only (B) (iv) only
- (C) (i), (iii) and (iv) only (D) (ii), (iii) and (iv) only

Q37. A few salts are listed as :

- | | | |
|-------------------|-------------------|-----------------------|
| (i) Epsom salt | (ii) Washing Soda | |
| (iii) Baking Soda | (iv) Blue Vitriol | (v) Potassium Nitrate |

Identify the hydrated salts from the given list:

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

Q38. Identify the physical- reversible changes among the following:

- | | |
|--------------------------|----------------------------|
| (i) Melting of wax | (ii) Slaking of lime |
| (iii) Plucking of Leaves | (iv) Condensation of steam |
- (A) (i) and (iii) only (B) (ii) and (iv) only
- (C) (i) and (iv) only (D) (ii) and (iii) only

Q39. Exposed surface of a sliced brinjal turns black due to

- | | |
|--------------------------------|------------------------------------|
| (A) formation of new substance | (B) a physical irreversible change |
| (C) an irreversible change | (D) both (A) and (C) |

Q40. _____ are always at the beginning of the food chain.

- (A) Decomposers (B) Scavengers (C) Consumers (D) Producers

Biology (5 Marks)

Q41. Mammalian lungs have an enormous number of minute alveoli (air sacs). This is to allow _____.

- (A) more surface area for diffusion of gases.
 (B) more space for increasing the volume of inspired air.
 (C) more nerve supply to keep the lungs working.
 (D) more spongy texture for keeping lung in proper shape.

Q42. The common bile duct in human is formed by the joining of:-

- (A) pancreatic duct and bile duct.
 (B) cystic duct and hepatic duct.
 (C) cystic duct and pancreatic duct.
 (D) hepatic duct and pancreatic duct.

Q43. Photosynthetic pigments such as chlorophyll *a*, chlorophyll *b*, xanthophyll and carotene can be separated by which of the following techniques?

- (A) Paper chromatography (B) X-ray diffusion
 (C) Gel Electrophoresis (D) ELISA test

Q44. What is the main function of the rumen in ruminant digestion ?

- (A) Acid hydrolysis (B) Lipid absorption
 (C) Fermentation of feed (D) Bile secretion

Q45. Lack of oxygen in muscles often leads to cramps among cricketers. This results due to _____.

- (A) conversion of pyruvate to ethanol.
 (B) conversion of pyruvate to glucose.
 (C) non conversion of glucose to pyruvate.
 (D) conversion of pyruvate to lactic acid.

Aptitude (15 Marks)

Q46. A joint family consists of seven members A, B, C, D, E, F and G with three females. G is a widow and a sister-in-law of D's father F. B and D are siblings and A is a daughter of B. C is a cousin of B. Who is E?

- i) Wife of F
- ii) Grandmother of A
- iii) Aunt of C

Select the correct answer using the code given below:

- (A) 1 and 2 only
- (B) 2 and 3 only
- (C) 1 and 3 only
- (D) 1, 2 and 3

Q47. It was Sunday on January 1, 2006. Find the day of the week on January 1, 2010.

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

Q48. At 3:40, the hour hand and the minute hand of a clock form an angle of _____.

- (A) 120°
- (B) 125°
- (C) 130°
- (D) 135°

Q49. Find the missing number in the given series:

125, 80, 45, 20, ?

- (A) 5
- (B) 8
- (C) 10
- (D) 12

Q50. Ornithologist : Bird :: Anthropologist : ?

- (A) Islands
- (B) Mediators
- (C) Mankind
- (D) Aquatic

Q51. Choose the odd pair of words:

- (A) Sheep : Bleat
- (B) Horse : Neigh
- (C) Ass : Grunt
- (D) Owl : Hoot

Q52. Menu : Food :: Catalogue : ?

- (A) Rock
- (B) Newspaper
- (C) Library
- (D) Books

Q53. A group of forest animals has invented their own secret language. In this code, LION is written as PLQO. Following the same rules, how would they encode the word BEAR?

- (A) FIOV
- (B) FHDV
- (C) FIPV
- (D) FHCS

Q54. If ROTSF is coded as 619201518, then what will be ZOHAK coded as?

- (A) 11181526 (B) 27158111 (C) 11181525 (D) 1182615

Q55. Choose the word which is different from the rest:

- (A) Raid (B) Ambush (C) Assault (D) Defence

Q56. Choose the odd one out:

- (A) BdEg (B) KmNp (C) PrSu (D) TwXz

Q57. $11\frac{1}{9}$, $12\frac{1}{2}$, $14\frac{2}{7}$, $16\frac{2}{3}$, ?

- (A) $8\frac{1}{3}$ (B) $19\frac{1}{2}$ (C) 20 (D) $22\frac{1}{3}$

Q58. If M denotes '-', N denotes '+', O denotes '×' and P denotes '÷', then find the value of 5N140P20O15M18.

- (A) 110 (B) 112 (C) 92 (D) 85

Q59. Ram walked 4m towards North, turned West and walked 3m, then turned North again and walked 2m and then turned East and walked 11m. How far away is he now from the starting point?

- (A) 10m (B) 15m (C) 12m (D) 18m

Q60. Find the missing term in the given series:

POE, QNF, SMH, VLK, ?

- (A) YKO (B) ZKO (C) ZJO (D) WKP

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