QUESTION PAPER (PHASE – I)

M.M:60　　　　　　**CLASS - IX**　　　　　　**Time: 60 Minutes**

ENGLISH (10)

Q1. A place where arms and ammunitions are kept –

(a) Archive　　　　(b) Arsenal　　　　(c) Barracks　　　　(d) Stable

Q2. If the moon _____ with the earth, there would be an apocalyptic disaster.

(a) collides　　　　(b) had collided　　　　(c) collided　　　　(d) has collided

Q3. _____ that he were here!

(a) Should　　　　(b) Could　　　　(c) Would　　　　(d) May

Q4. Do you have _____ extra pen?

(a) any　　　　(b) some　　　　(c) each　　　　(d) either

Q5. He told me that he _____ there the previous year.

(a) was　　　　(b) has been　　　　(c) had been　　　　(d) were

Q6. Two-thirds of the books _____ replaced with new ones.

(a) was　　　　(b) is　　　　(c) have　　　　(d) were

Q7. He is not a bad person. Figure of speech used is –

(a) Litotes　　　　(b) Onomatopoeia　　　　(c) Metonymy　　　　(d) Antithesis

Q8. She has got _____ unique tone.

(a) a　　　　(b) an　　　　(c) the　　　　(d) no article

Q9. He is <u>at sixes and sevens</u> the underlined phrase means:-

(a) confident　　　　(b) bold　　　　(c) weak　　　　(d) confused

Q10. He said to his mother, "Did you prepare sweets today?"

(a) He asked his mother if she prepared sweets today.

(b) He asked his mother if she had prepared sweets that day.

(c) He asked his mother if she did prepare sweets that day.

(d) He asked his mother if she had prepared sweets today.

MATHEMATICS (20)

Q11. If $3^x = 7^y = 63^z$ then $x =$?

(a) $\dfrac{y-z}{2yz}$ (b) $\dfrac{z-y}{2yz}$ (c) $\dfrac{2yz}{y-z}$ (d) $\dfrac{2yz}{z-y}$

Q12. Area of triangle formed by points (–8, 0), (14, 0) and (0, –12) is :–

(a) 122 square units   (b) 32 square units

(c) 102 square units   (d) 132 square units

Q13. AD is diameter of a circle and AB is a chord. If AD = 38 cm, AB = 34 cm then distance of AB from the center is

(a) $6\sqrt{2}$ cm   (b) 72 cm   (c) $12\sqrt{2}$ cm   (d) 14 cm

Q14. If $x = \sqrt{\dfrac{7+4\sqrt{3}}{7-4\sqrt{3}}}$ then $x^{105}(x-14)^{105} =$?

(a) –1   (b) 1   (c) 105   (d) None of these

Q15. Find value of m satisfying $\sqrt{861 - \sqrt[5]{m}} = 29$

(a) 6400000   (b) 3200000   (c) 12800000   (d) 15625

Q16. The remainder when $f(x) = 1 + x + x^2 + x^3 + \ldots x^{4009}$ is divided by $x - 1$ is

(a) 0   (b) 1   (c) 2005   (d) 4010

Q17. If 3 is added to each of two numbers their ratio becomes 19 : 37. When 1 is subtracted from second number only then ratio becomes 1 : 2, then numbers are :–

(a) 45 & 91   (b) 35 & 71   (c) 25 & 51   (d) 15 & 31

Q18. In a right angled triangle, if square of hypotenuse is twice the product of other two sides, then one of angles of triangle is:–

(a) one–fourth of right angle   (b) one–third of right angle

(c) half of right angle   (d) two–third of right angle

Q19. In a quadrilateral ABCD, ∠B = 90°, ∠C – ∠D = 60° and ∠A – ∠C – ∠D = 10°.

What is difference of greatest angle and smallest angle of this quadrilateral?

(a) 75°   (b) 85°   (c) 95°   (d) 105°

Q20. If length of side of a rhombus is 26m and one of its diagonal is 20m, then area of rhombus is –

(a) 520 m²   (b) 480 m²   (c) 440 m²   (d) 130 m²

Q21. Two solid spheres made of the same metal have weights 11840 gm and 1480 gm, respectively. Find the diameter of the smaller sphere, if the radius of the larger sphere is 5 cm.

(a) 2.5 cm   (b) 4.0 cm   (c) 5.0 cm   (d) 10.0 cm

Q22. A cylindrical rod of iron whose height is eight times its radius is melted and recast into spherical balls each of half the radius of the cylinder. The number of such spherical balls is:

(a) 12   (b) 16   (c) 24   (d) 48

Q23. The sides of a triangular field are 41 m, 40 m and 9 m. The number of rose beds that can be prepared in the field if each rose bed, on an average, needs 900 squares cm space is:-

(a) 2000   (b) 1800   (c) 900   (d) 800

Q24. In a triangle, the sum of any two sides exceeds the third side by 2 cm, then the area in sq. cm is

(a) $\frac{\sqrt{3}}{4}$ (b) $\frac{3\sqrt{3}}{4}$ (c) $\frac{\sqrt{3}}{2}$ (d) $\sqrt{3}$

Q25. A rhombus shaped sheet with perimeter 20 cm and one diagonal 6 cm is painted on both sides at the rate of 10 Rs. per cm². Find the cost of painting.

(a) Rs. 120   (b) Rs. 240   (c) Rs. 480   (d) Rs. 960

Q26. If $x - \frac{1}{x} = 2$, then the value of $x^5 - \frac{1}{x^5}$ is:

(a) 68   (b) 54   (c) 34   (d) 82

Q27. Let P be the mid-point and 13 be the lower limit of a class in a continuous frequency distribution. The upper class limit of the class is:

(a) P – 13   (b) P + 13   (c) 2P + 13   (d) 2P – 13

Q28. Find an angle which is one ninth of its reflex angle.

(a) 36°   (b) 72°   (c) 162°   (d) 324°

Q29. In a ΔABC, ∠A – ∠B = 66° and ∠B – ∠C = 36°, find the greatest angle.

(a) 88°   (b) 108°   (c) 116°   (d) 132°

Q30. PQRS is a rhombus whose three vertices Q, R and S lie on a circle with centre P. If the radius of the circle is 20 cm, find the approximate area of the rhombus.

(a) 140 cm²   (a) 240 cm²   (a) 340 cm²   (a) 440 cm²

SOCIAL SCIENCE (10)

Q31. Why did people hate 'Bastille'?

(a) Because it stood for the despotic power of king

(b) Because it stood for the armed power

(c) Because it stood for the man power

(d) Because it stood for the money power

Q32. By which name the well –to–do peasants in Russia called?

(a) Kulaks   (b) Kolkhoj   (c) Serfs   (d) Mir

Q33. Which one is an artificial (man-made) lake?

(a) Loktak   (b) Sambhar   (c) Wular   (d) Hirakud

Q34. Which part of India experiences the highest range of temperature in a day?

(a) Uttar Pradesh   (b) Madhya Pradesh

(c) Gujarat   (d) Thar Desert in Rajasthan

Q35. Who was the head of the Second Backward Classes Commission?

(a) V.P. Mandal   (b) B.P. Mandal   (c) C.P. Mandal   (d) D.P. Mandal

Q36. Which among the following is not a feature of the Indian Constitution?

(a) A written Constitution   (b) Federal form of government

(c) Double Citizenship   (d) Parliamentary form of government

Q37. Who drafted the constitution for India in 1928?

(a) Only Motilal Nehru   (b) Dr. Rajendra Prasad

(c) Motilal Nehru and eight other congress leaders   (d) A few congress leaders

Q38. Which plateau lies between the Aravali and the Vindhyan Range?

(a) Malwa Plateau   (b) Deccan Plateau

(C) Peninsular Plateau   (d) Chota Nagpur Plateau

Q39. What is the main adverse effect of unemployment?

(a) People stop voting   (b) Hue and cry in the country

(c) Increase in economic overload   (d) People start moving abroad

Q40. In which state of India, the famous cooperative Amul is situated?

(a) Delhi   (b) Haryana   (c) Gujarat   (d) Karnataka

SCIENCE (20)

PHYSICS (7)

Q41. A body is moving in a circular path with constant speed. Which of the following statements is/are incorrect?

(I) The velocity is constant.

(II) The acceleration is zero.

(III) The acceleration is along the radius.

(IV) The acceleration is along the tangent.

(a) I and II are incorrect   (b) I, II and III are incorrect

(c) I, II and IV are incorrect   (d) all four statements are incorrect

Q42. A lift is designed to carry a load of 4000 kg through 10 floors of a building, averaging 6 m per floor, in 10 second. Calculate the horse power of the lift.

(1hp = 746 W)

(a) 310.3 hp   (b) 315.3 hp   (c) 320.3 hp   (d) 325.3 hp

Q43. Two planets of radii r_1 and r_2 are made from the same material having same density. The ratio of acceleration due to gravity g_1 / g_2 at the surface of the planets is

(a) r_1 / r_2 (b) r_2^2 / r_1^2 (c) r_1^2 / r_2^2 (d) (r_2 / r_1)

Q44. On halved the distance between two masses, the gravitational force between them will be :

(a) Half   (b) One-fourth   (c) Four times   (d) Double

Q45. Voice of a friend is recognised by its _____.

(a) pitch   (b) quality   (c) intensity   (d) velocity

Q46. The volume of a small ball is calculated to be 25 cm^3 and it weighs 30 g in air. Will this ball float or sink in water?

(a) Sink   (b) Partially sink

(c) Float   (d) More than one of the above

Q47. A rocket with a lift-off mass 20,000 kg is blasted upwards with an initial acceleration of 5 m/s^2. Calculate the initial thrust (force) of the blast.

(a) $3 \times 10^5 N$ (b) $3 \times 10^{-5} N$ (c) $5 \times 10^{-5} N$ (d) $4 \times 10^{-5} N$

CHEMISTRY (7)

Q48. Tritium nucleus contains _____.

(a) 1 proton + 2 neutron

(b) 2 proton + 0 neutron

(c) 1 proton + 1 electron

(d) 2 proton + 2 neutron

Q49. Which of the following statements are correct?

I. At 273 K, both ice and water co-exist.

II. Ice at 0° C is more effective in cooling a substance than water at 0° C.

III. Particle in water at 0° C have more energy as compared to particles in ice at the same temperature.

IV. Increase in pressure increases the freezing point of water.

(a) I and IV only   (b) I, II and III only   (c) III and IV only   (d) I, II, III and IV

Q50. Which of the following is a characteristic of both mixtures and compounds?

(a) They contain components in fixed proportions.

(b) Their properties are the same as those of their components.

(c) Their weight equals the sum of the weights of their components.

(d) Energy is given out when they are being prepared.

Q51. Phalguni prepared a salt solution with concentration 11.2% (mass by mass percentage) in 320g of water. Vishal prepared a salt solution by dissolving the same amount of salt (as used by Phalguni), but in 180g of water. What is the concentration (in mass by mass percentage) of the solution prepared by Vishal?

(a) 24.2%   (b) 29.9%   (c) 23.8%   (d) 18.3%

Q52. The pair of valences exhibited by tin (Sn) is _____.

(a) 1, 4   (b) 1, 2   (c) 2, 3   (d) 2, 4

Q53. In an experiment, 3.00g of pure copper (II) oxide was reduced to pure metal by heating with pure carbon. In another experiment, 2.30g of pure copper was treated with nitric acid and the product formed was heated strongly till no further change was observed. The mass of copper (II) oxide so formed was found to be 2.80g. The mass of pure metal formed in the first experiment and the law followed are respectively.

(a) 1.15 g and law of conservation of mass

(b) 1.50 g and law of constant proportions

(c) 2.47 g and law of constant proportions

(d) 2.47 g and law of multiple proportions

Q54. The percentage of an element M is 71.5 in its oxide of molecular formula MO. Its atomic mass is about _____.

(a) 45   (b) 40   (c) 36   (d) 27

BIOLOGY (6)

Q55. The scientist who carried out a revolutionary method of staining individual nerve and cell structures was –

(a) Robert Hooke   (b) Camillo Golgi   (c) Robert Brown   (d) J.B.S. Haldane

Q56. Mitochondria are known to be power house of the cell and to produce energy in the form of ATP.

Which of the following statement is true about mitochondria?

(a) The outer membrane is non-porous.

(b) The inner membrane is deeply folded while the outer membrane is very porous.

(c) The outer membrane is porous and deeply folded.

(d) The inner membrane is very porous and deeply folded.

Q57. Tracheids and vessels are tubular structure and perform the conduction of water and minerals in _____ .

(a) Bidirection   (b) Horizontal direction

(c) Vertical direction   (d) Multidirection

Q58. Contraction and relaxation of blood vessels and the movement of food in alimentary canal are –

(a) Involuntary movements

(b) Voluntary movements

(c) Contraction and relaxation of blood vessels are voluntary movements

(d) Movement of food in alimentary canal is voluntary movement as well as involuntary movements.

Q59. The growing of different crops on a piece of land in a pre-planned succession is known as:-

(a) Monocropping   (b) Inter-cropping

(c) Mixed-cropping   (d) Crop-rotation

Q60. Fish species may have different feeding zones in an aquatic habitat. Which statement is correct about fish species according to feeding zones?

(a) Catlas are surface feeders   (b) Rohus are bottom zone feeders

(c) Common carps are middle zone feeders   (d) Mrigals are surface feeders