Where all the students get equal opportunity to show their brilliance and win amazing prizes!

SCOOTY   TABLETS   KINDLES   BICYCLES   SPORTS KIT

EXAMINATION (PHASE-I)

RPS OLYMPIAD-2022

CLASS-8th

M.M. : 60

Time : 60 Mins.

ENGLISH (15 Marks)

A. Fill in the blanks by choosing the most appropriate option:- (Q1-7)

1. By the time she was fifteen, she _____ a beautiful singer.

    a) shall become   b) had become   c) become   d) has become

2. _____ I borrow some money from your father?

    a) Ought   b) May   c) Might   d) Would

3. "We _____ definitely look into the matter", the officer affirmed.

    a) can   b) will   c) would   d) need to

4. I congratulate you _____your success.

    a) for   b) of   c) on   d) in

5. I cannot agree _____ you on the subject.

    a) to   b) for   c) with   d) about

6. My mother, along with others _____ worried.

    a) were   b) are   c) have   d) was

7. None of the candidates _____ responded.

    a) were   b) have   c) has   d) is

8. Choose the correct sentence.

    a) When I woke up, he has already eaten his breakfast.

    b) When I woke up, he had already taken his breakfast.

    c) When I had woke up, he had already ate his breakfast.

    d) When I had woken up, he has already ate his breakfast.

B. A sentence has been given in Direct/ Indirect speech. Choose the correct option which expresses the same sentence in Direct/Indirect speech. (Q9-11)

9. She said, "You have been late. Everybody's here already".

    a) She said that I had been late and everybody was there already.

    b) She said that I was late and that everyone was there already.

    c) She said that I got late so everybody was there already.

    d) She said that I am late and everybody got there already.

10. Joseph said, "Alas! These are difficult times".

    a) Joseph said that those were difficult times.

    b) Joseph said it would have been difficult times.

    c) Joseph sighed with sorrow that those were difficult times.

    d) Joseph exclaimed that those were difficult times.

11. The traveler enquired to the farmer if he could tell him the way to the nearest inn.

    a) The traveler said to the farmer, "Where is the nearest inn?"

    b) The traveler said to the farmer, "Which is the way to the nearest inn?"

    c) The traveler said to the farmer, "Can you tell me the way to the nearest inn?"

    d) The traveler said to the farmer, "Can you tell me where is the nearest inn?"

C. Choose the correct option which expresses the meaning of the underlined idiom/phrase. (Q12-13)

12. Being an introvert, he will eat his **heart out**.

    a) eat too much   b) keep brooding   c) invite trouble   d) suffer silently

13. By putting on the mime act, Deepak **stole some of the thunder** of Peter's speech.

    a) made unimpressive   b) filched something   c) detracted the listeners   d) made noise

D. A sentence has been given in Active voice. Choose the correct option which expresses the same sentence in Passive voice. (Q14-15)

14. Look up the word in the dictionary.

    a) Let's look up the word in the dictionary.

    b) Let the word looked up in the dictionary.

    c) Let the word be looking up in the dictionary.

    d) Let the word be looked up in the dictionary.

15. None of them had seen me.

    a) I hadn't been seen   b) I have not been seen.

    c) No one had seen me.   d) I had been seen.

Mathematics (15 Marks)

16. If $3(x-2)^2 = 507$, then x can be _____.

    a) 13   b) 12   c) 15   d) 14

17. If $11^x = 3^y = 99^z$, then $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} =$ _____.

    a) $\frac{2}{z} - \frac{1}{y}$ b) $\frac{2}{z} + \frac{1}{y}$ c) $-\frac{1}{y}$ d) 0

18. One-third of 1206 is what percent of 134?

    a) 3   b) 30   c) 300   d) None of these

19. The value of $\sqrt{117^2 - 108^2}$ is _____.

    a) 55   b) 45   c) 35   d) 65

20. A number, when decreased by 20%, becomes 136. What is the number?

    a) 160   b) 150   c) 170   d) 140

21. A number is 56 greater than the average of its third, quarter and one-twelfth. The number is

    a) 18   b) 36   c) 54   d) 72
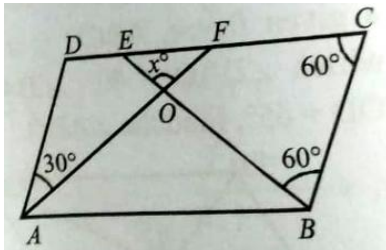
22. If $(2^{3x-1} + 10) \div 7 = 6$, then x is equal to

    a) –2   b) 0   c) 1   d) 2

23. If the base radius of a cone is doubled and its height is halved, then which of the following is true regarding its volume?

    a) Increases by 200%   b) Decreases by 200%

    c) Increases by 100%   d) Decreases by 100%

24. In the below given figure of parallelogram, find the measure of x°.

    a) 90° b) 80° c) 70° d) 60°

25. One of the factors of $x^2 + \frac{1}{x^2} + 2 - 2x - \frac{2}{x}$ is

    a) $x - \frac{1}{x}$ b) $x + \frac{1}{x} - 1$ c) $x + \frac{1}{x}$ d) $x^2 + \frac{1}{x^2}$

26. If $3x - 7y = 10$ and $xy = -1$, then the value of $9x^2 + 49y^2$ is

    a) 58   b) 142   c) 104   d) – 104

27. The length of a cylindrical metallic tube is one metre. Its thickness is 1cm and its internal diameter is 12cm. Find the weight of the tube if the density of metal is 7.7 gram per cubic cm.

    a) 32.67 kg   b) 33.84 kg   c) 32.24 kg   d) 31.46 kg

28. Which of the following cannot be true for polyhedron?

    a) faces = 4, vertices = 4, edges = 6   b) faces = 8, vertices = 6, edges = 12

    c) faces = 5, vertices = 4, edges = 6   d) faces = 20, vertices = 12, edges = 30

29. If the area of three adjacent faces of a cuboid is p, q, r respectively, then the volume of air in the room is;

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

30. 15 boys earn Rs 900 in 5 days. How much will 20 boys earn in 7 days?

    a) Rs 1680   b) Rs 1480   c) Rs 1580   d) Rs 1780

Science (15 Marks)

Physics (5 Marks)

31. The two thigh bones (Femurs), each of cross section area 10 cm^2 support the upper part of a human body of mass 40 kg. Estimate the average pressure sustained by the Femurs. Take $g = 10$ m/s^2.

    a) 2×10^6 N/m^2 b) 2×10^4 N/m^2 c) 2×10^5 N/m^2 d) 2×10^{-5} N/m^2

32. A block of mass 4 kg is placed on a floor. The coefficient of friction between block and floor is 0.2. If a 6N force is applied on the block, what is the value of acceleration of block? (Take $g = 10$m/s^2)

a) 2 m/s^2 b) 8 m/s^2 c) – 1.5 m/s^2 d) zero

33. When glass is rubbed with silk cloth……..

     a) The glass rod acquire negative charge.   b) Electrons are transferred from glass to silk.

     c) Electrons are transferred from silk to glass.   d) Silk acquires positive charge.

34. A sound wave has a frequency 1000 Hz and wavelength 50 cm. How long will it take to move through 1 km ?

     a) 2.5 s   b) 2.05 s   c) 2 s   d) 4 s

35. A boy of height 150 cm wants to see his full image in a plane mirror. Find the minimum length of the mirror required ?

     a) 150 cm   b) 75 cm   c) 0.75 m   d) both (b) & (c)

Chemistry (5 Marks)

36. One of the main constituents of amalgam is –

     a) Aluminium   b) Copper   c) Iron   d) Mercury

37. $Fe_2O_3 + 2Al \rightarrow Al_2O_3 + 2Fe$. the given reaction is an example of a –

     a) Combination reaction   b) Double displacement reaction

     c) Decomposition reaction   d) Displacement reaction

38. How much percentage of carbon is present in bituminous coal ?

     a) 20 – 25 %   b) 25 – 35 %   c) 65 – 85 %   d) 98 %

39. Aqua regia is a freshly prepared mixture of concentrated HNO_3 and concentrated HCl in the ratio of

     a) 1 : 3 respectively   b) 2 : 3 respectively

     c) 3 : 1 respectively   d) 3 : 2 respectively

40. A tester is used to check the conduction of electricity through two liquids, labelled A & B. It is found that the bulb of the tester glows brightly for liquid A, while it glows very dimly for liquid B. You would conclude that :-

     a) Liquid A is a better conductor than liquid B.

     b) Liquid B is a better conductor than liquid A.

     c) Both liquids are equally conducting.

     d) Conducting properties of liquid cannot be compared in this manner.

Biology (5 Marks)

41. Which hormone initiates the metamorphosis in insects ?

     a) Thyroxine   b) Insulin   c) Growth Hormone   d) Adrenaline

42. Which chromosomes determine sex of an individual ?

     a) Autosomes   b) Allosomes   c) Plasmid   d) Giant Chromosome

43. Generally mammals are viviparous. But this animal is an oviparous. It is a

    a) Platypus   b) Blue whale   c) Echidna   d) Both (a) and (c)

44. Food like meat, fish, vegetables etc. can be stored for a longer time in a freezer because
    a) Microorganisms grow at faster rate in cold environment
    b) Microorganisms present in food cannot grow and reproduce at low temperature.
    c) Microorganisms present in food can grow and reproduce at low temperature
    d) All of above

45. Food substance are digested with the help of enzymes that are present in
    a) Mitochondria   b) Golgi complex   c) Lysosome   d) Ribosome

---

Aptitude (15 Marks)

Direction (46): - Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

46. 3, 8, 13, 24, 41, ?
    a) 70   b) 75   c) 80   d) 85

Direction (47): - In this questions, one term in the number series is wrong. Find out the wrong term.
    105, 85, 60, 30, 0, – 45, – 90

    a) 105   b) 60   c) 0   d) – 45

Direction (48-49): In a code language, letters of English alphabet (consonants and vowels) are coded as given for some words below. The number code for each letter is given in bracket under coded form and corresponds to the letter in the word in the same serial order. Read the coded forms of the given words and find out the rules for their logic. Applying those rules, answer the questions that follow in two sets.

Word	Coded Form
SEAT	(5) (15) (15) (5)
UNIT	(30) (5) (30) (5)
PAGE	(5) (25) (25) (5)
ATE	(0) (5) (0)
OPEN	(30) (5) (30) (5)
BOOK	(5) (20) (20) (5)
PIN	(5) (10) (5)
POUR	(5) (15) (15) (5)
DEEP	(5) (20) (20) (5)
NONE	(5) (25) (5) (25)

48. DESO
    a) (5) (0) (5) (15)   b) (5) (30) (5) (30)   c) (5) (10) (5) (10)   d) (5) (25) (5) (25)

49. SUP
    a) (5) (0) (5)   b) (0) (5) (0)   c) (5) (5) (5)   d) (5) (10) (5)

Direction (50): - In this question, some groups of numbers are given, all of which, except one, share a common similarity while one is different. Choose the odd one out.

50.   a) Parsley   b) Basil   c) Dill   d) Mayonnaise

51. A square field ABCD of side 90 m is so located that its diagonal AC is from north to south and the corner B is to the west of D. Rohan and Rahul start walking along the sides from B and C respectively in the clockwise and anti-clockwise directions with speeds of 8km/hr and 10km/hr. Where shall they cross each other the second time?

a) On AD at a distance of 30 m from A   b) On BC at a distance of 10 m from C

c) On AD at a distance of 30 m from D   d) On BC at a distance of 10 m from B

Directions (52-53): Study the following set of questions carefully and answer the questions given below.

When VinaPatni, tops in her MBBS course, she becomes the 7th member of her family to join the Medical Profession. All other family members namely Tanmay, Neerja, Monnish, Sanchit,Ruchikanad Vinita are working at Sawai Man Singh Hospital as doctors, and Vina who is the youngest of the third generation, is all set to join them. In this family of three generations, there are two pairs of couples and two pairs of brothers and sisters. There are three Oncologists, two Dentists, one Physician and one Neurologist in the family. No female in the family is an Oncologist. Vinita is not a Neurologist. No married person in the family is a Dentist. Tanmay is the son of Neerja while Sanchit is the son of Monnish and his wife his Vinita. Monnish is an Oncologist. Monnish and Vinita are the eldest couple in the family. Vina is the daughter of Sanchit while Ruchika is the sister-in-law of Neerja.

52. How is Neerja related to Vinita?
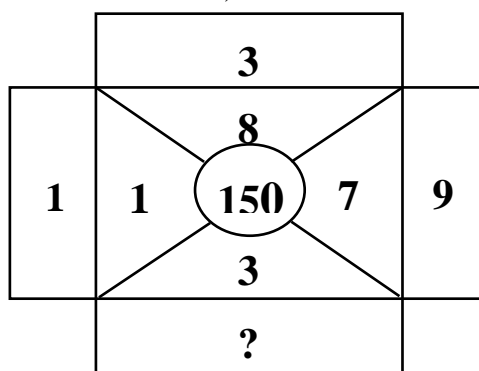a) Mother-in-law   b) Daughter-in-law   c) Daughter   d) Can't say

53. Who among the following persons is not an Oncologist?
a) Tanmay   b) Monnish   c) Sanchit   d) Vinita

54. Which one will replace the question mark?
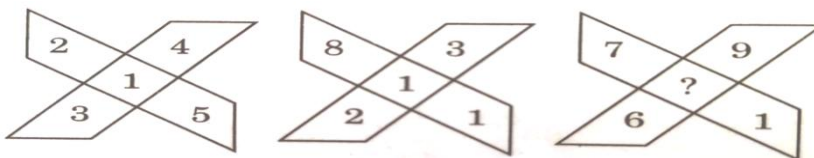
a) 10   b) 8.5   c) 12   d) 9

55.

a) 17   b) 7   c) 27   d) 4

56. A clock loses $\frac{1}{2}$ % on the true time during one week and gains $\frac{1}{4}$ % on the true time during the next week if it is set right at 12 O'clock on Saturday morning. What time will it indicate at the end of second week (approx)?

    a) 11:48   b) 11:35   c) 12:15   d) 13:02

57. Any date in March of a year is the _____ day of the week corresponding date in November that year.

    a) Same day   b) Not same day   c) Next day   d) Previous day

58. **Statements:**

    A few of my friends are teachers.

    Teachers are rude.

    Some rude persons are good at heart.

    Conclusions:

    I. A few of my friends are good at heart.

    II. Some rude persons may not be teachers.

    a) Only C1 follows   b) Only C2 follows

    c) Both C1 and C2 follow   d) Neither C1 nor C2 follows

59. **Statements:**

    Only a few teachers are doctors.

    0% teachers are lawyers.

    Conclusions:

    I. All lawyers are teachers.

    II. Some doctors are not lawyers.

    a) If only conclusion I follows.   b) If only conclusion II follows.

    c) If neither conclusion I nor II follows   d) If both conclusions I and II follow

60. **Statements:**

    Some companies are industries.

    Some industries are primary.

    All primary are services.

    All services are secondary

    Conclusions:

    I. All companies being primary is possibility.

    II. All services are primary.

    III. No industry is secondary.

    a) Only conclusion I follows   b) Only conclusion II follows

    c) Only conclusion I and III follows   d) All conclusions follows