

ALL INDIA **RPS** 2021 OLYMPIAD

Organized by : -
RPS Education Society
Mahendergarh,
Haryana

2nd mega All India Online & Offline Event

Where the Brilliants can also have chance to get bigger platform in 2021



SANTRO CAR



SCOOTY



LAPTOPS



TABLETS



KINDLES



BICYCLES



EDUCATIONAL KIT

EXAMINATION (PHASE-I)

RPS Olympiad-2021

Class-8th

M.M. : 60**Time : 60 Mins.****English (15 Marks)**

Direction: (Q1 to Q3) Choose the alternative which best expresses the meaning of each underlined idiom / phrase.

1. Our plan to go to London is in the air.
 - (a) undecided
 - (b) certain
 - (c) under consideration
 - (d) for approval
2. She is a person who pulls no punches.
 - (a) speaks politely
 - (b) speaks frankly
 - (c) speaks rudely
 - (d) speaks sweetly
3. He is as daft as a brush. Don't believe a word of what he says.
 - (a) a liar
 - (b) really silly
 - (c) very funny
 - (d) unreliable

Direction: (Q4 to Q5) A sentence has been given in Active Voice. Out of the four alternatives, select the one which best expresses the same sentence in Passive Voice.

4. Can we rely on him?
 - (a) Can we be relied by him?
 - (b) Can we be relied on by him?
 - (c) Can he be relied by us?
 - (d) Can he be relied on?
5. God helps those who help themselves.
 - (a) Those who help themselves are helped by God.
 - (b) Those who are helped by themselves are helped by God.
 - (c) Those who help God help themselves.
 - (d) Those who help themselves help God.

Direction (Q6-Q7) A sentence has been given in Direct/ Indirect speech. Out of the four alternatives, select the one which best expresses the same sentence in Direct/Indirect speech.

6. The teacher said that the burglar had broken into the office.

- (a) The teacher said, "The burglar broke into the office."
- (b) The teacher said, "The burglar break into the office."
- (c) The teacher said, "The burglar was broken in the office."
- (d) The teacher said, "The burglar broken into the office."

7. "Why don't you see a doctor?" said Mrs. Lal to Nina.

- (a) Mrs. Lal asked Nina why she couldn't see a doctor.
- (b) Mrs. Lal demanded why Nina didn't see her doctor.
- (c) Mrs. Lal advised Nina to see a doctor.
- (d) Mrs. Lal advised that Nina to see her doctor.

8. Find the incorrect sentence.

- (a) The queen bee, with her workers preside over the hive.
- (b) Pinky, Lilly and Sheela go to the same school.
- (c) Either of the two boys has done this.
- (d) You, who are my friend, should not blame me.

Direction: (Q9-14) Fill in the blanks by choosing appropriate option.

9. Had I saved money, I _____ a new car.

- (a) will purchase
- (b) would purchase
- (c) would have purchased
- (d) purchased

10. He is very good _____ making stories.

- (a) in
- (b) about
- (c) at
- (d) for

11. I _____ lest I should be wrecked.

- (a) am alarming
- (b) is alarmed
- (c) had alarmed
- (d) was alarmed

12. Candidates _____ answer all the questions.
- (a) should
(b) must
(c) would
(d) can
13. _____ that I were a king!
- (a) Should
(b) Could
(c) May
(d) Would
14. A large number of soldiers _____ died for the country.
- (a) has
(b) is
(c) are
(d) have
15. Choose the correct sentence.
- (a) Your cow is humbler than wild.
(b) He was taller than handsome.
(c) Shweta is relatively healthier today.
(d) None of these

Maths (15 Marks)

16. If $a^m \cdot a^n = a^{mn}$, find the value of $\frac{1}{m} + \frac{1}{n}$.
- (a) 2 (b) 1 (c) 3 (d) $\frac{1}{2}$
17. Which of the following is binomial?
- (a) ax (b) $(x-y)^2$ (c) $(x+y)^2$ (d) $(x+y)(x-y)$
18. Which of the following cannot be true for a polyhedron?
- (a) $V=4, F=4, E=6$ (b) $V=6, F=8, E=12$ (c) $V=20, F=12, E=30$ (d) $V=4, F=6, E=6$
19. Find the value of $\frac{5 \times 3^{n+1} - 4 \times 3^n}{5 \times 3^{n+2} - 4 \times 3^{n+1}}$.
- (a) A natural number (b) A whole number
(c) An integer (d) A fraction whose value is $\frac{1}{3}$.

20. If $ab + bc + ca = 4$ and $abc = 2$, then find the value of $\frac{1}{a} + \frac{1}{b} + \frac{1}{c}$
- (a) 2 (b) 1 (c) 0 (d) -1
21. Rakesh and Siva can do a piece of work in 15 days and 18 days respectively. They work together for 5 days and then Rakesh leaves. In how many days will Siva alone finish the remaining work?
- (a) 5 (b) 6 (c) 8 (d) 7
22. A hall is 15m long and 12m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of hall is:
- (a) 720m^3 (b) 900m^3 (c) 1200m^3 (d) 1800m^3
23. Given that $\sqrt{n} = 21$, find the value of $3n+5$
- (a) 1328 (b) 1446 (c) 432 (d) 722
24. Given that $k = x + 2$ and $\frac{2k-3}{6} - \frac{k-1}{5} = \frac{x}{10}$, find the value of x .
- (a) 1 (b) 0 (c) 2 (d) 4
25. The sum of three times of a number and 6 is 30. Find the number
- (a) 8 (b) 10 (c) 12 (d) 15
26. Factors of $\frac{x^2}{y^2} - 2 + \frac{y^2}{x^2}$ are
- (a) $\left(\frac{x-y}{y-x}\right)\left(\frac{x-y}{y-x}\right)$ (b) $\left(\frac{x+y}{y-x}\right)\left(\frac{x-y}{y-x}\right)$ (c) $\left(\frac{x+y}{y-x}\right)\left(\frac{x+y}{y-x}\right)$ (d) None of these
27. If ABCD is a parallelogram, then $\angle A - \angle C$ is equal to
- (a) 60° (b) 90° (c) 180° (d) 0°
28. In what time will Rs 800 amount to Rs 882 at 5% per annum compounded annually?
- (a) 2 years (b) 3 years (c) 1 year (d) 5 years
29. The area of a trapezium is 180 cm^2 . Its parallel sides are in the ratio 1:2 and the distance between them is 12cm. The length of each of the parallel sides is
- (a) 10cm, 15cm (b) 15cm, 30cm (c) 20cm, 30cm (d) 10cm, 20cm
30. 15% of a number is less than 25% of the same number by 8. Find the number.
- (a) 120 (b) 150 (c) 100 (d) 80

Science (15 Marks)

31. The hormone secreted by the pineal gland is _____.

- (a) insulin
- (b) melatonin
- (c) adrenaline
- (d) growth hormone

32. Which of the following is matched correctly in the table given below?

Disease	Transmission
(i) AIDS	Through unprotected sexual intercourse
(ii) Malaria	Through body contact
(iii) Hepatitis A and B	Through contaminated food

(a) Only (i)
(b) (i) and (ii)
(c) (i) and (iii)
(d) (ii) and (iii)

33. Choose the correct statements.

- (i) The shape of the cells is related to their function.
 - (ii) All living cells come only from other non-living cells.
 - (iii) The size of the cells has no relation with the size of the body.
 - (iv) All living organisms are composed of cells and cell products.
- (a) (i) and (ii)
(b) (ii) and (iv)
(c) (ii), (iii) and (iv)
(d) (i), (iii) and (iv)

34. Implantation is _____.

- (a) hatching of a fertilized egg
- (b) attachment of embryo to the uterus wall
- (c) formation of new individual from parent body
- (d) fusion of sperm with ovum

35. Planaria reproduces by _____.

- (a) binary fission
- (b) budding
- (c) fragmentation

(d) regeneration.

36. Read the given statements and select the correct option.

Statement 1: Actions like pushing, pulling, lifting etc. result in some kind of change in the motion of an object.

Statement 2: The motion imparted to objects is due to the action of a force.

- (a) Only statement 1 is correct
- (b) Only statement 2 is correct
- (c) Both statements 1 and 2 are correct.
- (d) Neither statement 1 nor statement 2 is correct.

37. A person has applied some mustard oil on his hands. Which of the following objects will become most difficult for him to hold in his hand?

- (a) Glass tumbler
- (b) Earthen cup (Kulhar)
- (c) Thermocol tumbler
- (d) Wooden cup

38. A series of fast moving still pictures can create an illusion of movement. Why?

- (a) The eye can focus on very rapidly changing pictures.
- (b) The eye is quicker than the brain.
- (c) The eye can separate two images only when the interval of separation between them is one-sixteenth of a second.
- (d) The optical cortex can see through the rapidly moving images.

39. The frequency of a source is 15kHz. What will be the frequency of the sound wave produced by it in water and air?

- (a) It is the same as that of the source.
- (b) Frequency in water will be more than that in air.
- (c) Frequency in air will be more than that in water.
- (d) Depends upon the velocities of sound in these media.

40. What are the lightning streaks that we see?

- (a) UV rays from the sun
- (b) Cosmic rays
- (c) Accumulated electric charges
- (d) IR rays from the sun

41. What is the principle involved in the glowing of an electric bulb?
- (a) Magnetic effect of current
 - (b) Heating effect of current
 - (c) Chemical effect
 - (d) Conduction of current
42. Which of the following is in descending order of the quality of coal?
- (a) Peat > bituminous > lignite > anthracite
 - (b) Bituminous > peat > lignite > anthracite
 - (c) Anthracite > bituminous > lignite > peat
 - (d) Lignite > anthracite > bituminous > peat
43. What kind of reaction is combustion?
- (a) Reduction
 - (b) Redox
 - (c) Substitution
 - (d) Oxidation
44. Identify the oxide of a non- metal which is neutral.
- (a) SO₂
 - (b) NO₂
 - (c) P₂O₃
 - (d) CO
45. Why is plastic coated with melamine?
- (a) It becomes a good conductor of heat.
 - (b) It becomes strong and flexible.
 - (c) It becomes a fire proof plastic.
 - (d) It is remouldable.

Aptitude (15 Marks)

46. Complete the sequence: 19, 2, 38, 3, 114, 4, ?
(a) 352 (b) 256 (c) 228 (d) 456
47. A clock is set to show the correct time at 11AM. The clock gain 12 minutes in 12 hours. What will be the true time when the watch indicates 1 PM on the 6th day ?
(a) 10 AM (b) 12 Noon (c) 11 AM (d) None of these
48. All faces of a solid cube of edge 8 cm are coloured. Then it is divided equally in the cubes of edge 2 cm. How many cubes will have all faces coloured ?
(a) 1 (b) 4 (c) 8 (d) None of these
49. Deepa ranks 18th in a class of 49 students. What is her rank from the last?
(a) 31 (b) 32 (c) 19 (d) 18
50. In a certain code language, 'it pit sit' means 'I am boy', 'it nit sit' means 'I am girl'. Which of the following means 'girl'?
(a) it (b) pit (c) sit (d) nit
51. A family consists of a man, his wife his three sons their wives and three children in each son's family. How many members are there in the family?
(a) 12 (b) 13 (c) 15 (d) 17
52. Pratap starts from school and walks 7 km towards East. He takes a left and walks 4 km, then takes a right and walks 2 km, again takes a right and walks 3km. Which direction is he facing now?
(a) South (b) North (c) East (d) West
53. When will calendar of 2016 repeat?
(a) 2022 (b) 2036 (c) 2035 (d) 2044
54. On which dates of December, 1984 did Sunday fall ?
(a) 6th, 13th, 20th and 27th (b) 7th, 14th, 21st and 28th
(c) 2nd, 9th, 16th, 23rd and 30th (d) 1st, 8th, 15th and 22nd
55. How many degree cover by minute hand in 5 minute?
(a) 30° (b) 45° (c) 35° (d) 60°
56. Statements 1. All dogs are rats.
 2. All rats are crows.
 3. All crows are parrots.
Conclusions I. All dogs are parrots.
 II. Some parrots are dogs.
 III. Some crows are dogs.
 IV. All rats are dogs

- (a) I and II follow
(b) I, II and III follow
(c) Either II or IV follows
(d) Either I or II or III follows
57. If $64 \times 52 = 17$, $48 \times 56 = 23$ and $74 \times 35 = 19$ then $84 \times 37 = ?$
(a) 32 (b) 28 (c) 22 (d) 20
58. Among five friends, Mohan is older than Raju but not as old as Lalit. Lalit is older than Neelesh and Kabir. Neelesh is young than Raju but not the Youngest. Who is the fourth in the descending order of age ?
(a) Mohan (b) Raju (c) Kabir (d) None of these
59. Find the missing term in the given series.
1 - n - m l l m - n - l
(a) mnmn (b) mnm (c) mnm (d) nmmm
60. A Monkey climbs 30 feet at the beginning of each hour and rests for a while when he slips back 20 feet before he again starts climbing the beginning of the next hour. If he begins his ascent at 8.00 am, at what time will he first touch a flag at 120 feet from the ground?
(a) 4 PM (b) 6 PM (c) 3 PM (d) 5 PM