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OLYMPIAD 2022
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PHASE-1 SUNDAY
13 FEBRUARY
I to X
09:00 A.M. onwards (Online)

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Last date for Registration :
FRIDAY,
FEBRUARY 11, 2022

Prizes include: Smartphone, Tablet, Scooter, Bicycle, Sports Kit.

RPSOLYMPIAD-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. Rohan _____ the movie before he read the review.
a) watches b) have watched c) had watched d) was watching
2. The audience _____ settle before the doors are closed.
a) can b) shall c) might d) must
3. During peak hours, it _____ take more than two hours.
a) can b) should c) shall d) will
4. He sympathized _____ him in his bereavement.
a) in b) for c) with d) by
5. Everyone in this world is accountable to God _____ his actions.
a) about b) for c) to d) over
6. My glasses _____ nowhere to be found.
a) is b) are c) have d) has
7. Each and every member _____ to vote.
a) has b) have c) are d) is
8. Choose the correct sentence.
a) Harry inviting me to his farmhouse once.
b) Harry shall invited me to his farmhouse once.
c) Harry had invited me to his farmhouse once.
d) Harry has been inviting me to his farmhouse once.

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. Meera said, "It's time. I must go now".
a) Meera said that it is time and she should leave.
b) Meera said that it was time and she had to go then.
c) Meera said that it was time to go then.
d) Meera said it is time and she may go.
10. "Wow! This is so beautiful", said Jacob.
a) Jacob was surprised to see how beautiful it was .
b) Jacob said how beautiful it was.
c) Jacob exclaimed with amazement that that was so beautiful.
d) Jacob exclaimed with amazement that it was so beautiful.

11. The father warned his son that he should be beware of him.
- The father warned his son, “Be careful about him!”
 - The father warned his son, “Beware of him!”
 - The father warned his son, “Watch that chap!”
 - The father warned his son, “Don’t fall into the trap!”

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

12. In the armed forces, it is considered a great privilege to **die in harness**.
- die on a horse back
 - die in the battlefield
 - die while still on work
 - die with honour
13. I am afraid he is **burning the candle at both ends** and ruining his life.
- wasting his money
 - becoming overgenerous
 - overtaxing his energies
 - losing his objectives

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

14. You can obtain milk at the dairy farm.
- Milk is obtainable at the dairy farm.
 - Milk at the dairy farm is obtained by you.
 - Milk at the dairy farm obtained by you.
 - At the dairy farm milk can be obtained by you.
15. One cannot please everybody.
- Everybody couldn’t be pleased by one.
 - Everybody can be pleased by one.
 - Everybody can’t be pleased by one.
 - Everybody will be pleased by one.

Mathematics (15 Marks)

16. A rectangular water reservoir contains 42000 litres of water. If the length of reservoir is 6m and its breadth is 3.5m, the depth of the reservoir is
- 2m
 - 5m
 - 6m
 - 8m

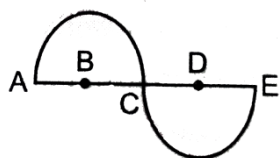
17. If 35% of A's income is equal to 25% of B's income, then the ratio of their incomes is
 a) 4 : 3 b) 5 : 7 c) 7 : 5 d) 4 : 7
18. The value of $\sqrt{7 + 2\sqrt{10}}$ is:
 a) $\sqrt{6} + \sqrt{1}$ b) $\sqrt{4} + \sqrt{3}$ c) $\sqrt{5} + \sqrt{2}$ d) $\sqrt{2} - \sqrt{5}$
19. The area of a square field is 60025 m^2 . A man cycles along its boundary at 18 km/hr. In how much time will he return at the starting point?
 a) 3min b) 3min 16sec c) 4min d) 4min 16sec
20. A polyhedron have 4 faces, 4 vertices and 6 edges. Name the polyhedron.
 a) A rectangular prism b) A triangular prism
 c) A rectangular pyramid d) A triangular pyramid
21. The width of a ring is 6 cm and the area of the inner circle is 616 cm^2 . Find the circumference of the outer circle.
 a) 88 cm b) $\frac{880}{7}$ cm c) $\frac{264}{7}$ cm d) $\frac{8800}{7}$ cm
22. Solve for x : $\frac{6x^2 + 13x - 4}{2x + 5} = \frac{12x^2 + 5x - 2}{4x + 3}$
 a) 3 b) 2 c) 1 d) 4
23. Factorising $(x - y)^2 + 4xy - z^2$, we get
 a) $(x + y + z)(x + y - z)$ b) $(x - y - z)(x + y - z)$
 c) $(x - y + z)(x + y - z)$ d) None of these
24. The edge of a cube is 20cm. How many small cubes of 5cm edge can be formed from this cube?
 a) 4 b) 32 c) 64 d) 100
25. Find the cube root of $1+3+5+7+\dots\dots\dots+53$.
 a) 11 b) 13 d) 7 d) 9
26. Two regular polygons are such that the ratio between their number of sides is 1:2 and the ratio of measures of their interior angles is 3:4. Find the number of sides of each polygon.
 a) 2, 8 b) 4, 6 c) 5, 10 d) 6, 12
27. Find the values of a and b so that $x^4 + x^3 + 8x^2 + ax + b$ is divisible by $x^2 + 1$.
 a) 2, 7 b) 1, 7 c) 8, 3 d) 08
28. A does 20% less work than B. If A can finish a piece of work in $7\frac{1}{2}$ hours, then B can finish it in
 a) 5 hours b) $5\frac{1}{2}$ hours c) $6\frac{1}{2}$ hours d) 6 hours
29. Among $\sqrt{2}$, $\sqrt[3]{3}$, $\sqrt[4]{5}$, $\sqrt[3]{2}$, which one is the greatest?
 a) $\sqrt[4]{5}$ b) $\sqrt{2}$ c) $\sqrt[3]{3}$ d) $\sqrt[3]{2}$

30. A number is first increased by 10% and then decreased by 10%. The number
- a) does not change b) decrease by 1 % c) increase by 1% d) increase by 2%

Science (15 Marks)

Physics (5 Marks)

31. When white light is passed through a prism?
- a) Red colour is deviated the most.
b) All colours suffer equal deviation.
c) Violet colour is deviated the most.
d) Speed of different colours is same inside the prism.
32. Choose the incorrect statement.
- a) A charged body can attract oppositely charged body.
b) A charged body can attract uncharged body.
c) A charged body can attract similarly charged body.
d) An uncharged body can repel a charged body.
33. In the curve, half the wavelength is



- a) AB b) BD c) DE d) AE
34. A car of mass 1000 kg is moving with a velocity of 10 m/s and is acted upon by a forward force of 1000N due to engine and retarding force of 500N due to friction. What will be its velocity after 10 sec?
- a) 500 m/s b) 15 km/h c) 20 m/s d) 15 m/s
35. On doubling the speed of the body, the force of friction between the body and surface in contacts
- a) gets doubled b) gets halved c) gets four times d) does not change

Chemistry (5 Marks)

36. The arrangement for Copper, Tin, Lead and Mercury, according to the reactivity series is :-
- a) Tin > Lead > Copper > Mercury b) Lead > Copper > Mercury > Tin
c) Copper > Mercury > Tin > Lead d) Mercury > Tin > Lead > Copper
37. Which of the following metals constitute the alloy magnalium ?
- a) Al, Cu b) Al, Fe c) Al, Mg d) Al, Mn
38. The head of a matchstick contains a mixture of antimony trisulphide, potassium chlorate, starch and some

glue. For combustion, it is struck against a rough surface made of powdered glass and red phosphorus. Which of the following substances will be first to get ignited when the match is struck against a rough surface ?

- a) Antimony trisulphide b) Potassium chlorate
c) Red Phosphorus d) Powdered glass

39. By what name is artificial wool known as ?

- a) Rayon b) Acrylic c) Polycot d) Polyester

40. Main constituent of LPG is

- a) Methane b) Ethane c) Butane d) Propane

Biology (5 Marks)

41. In blue - green algae, the structure specialized for nitrogen fixation is

- a) Thylakoid b) Harmagonia c) Heterocyst d) Endospore

42. Virus possessing only protein is called

- a) Viroid b) Prion c) Viron d) Capsid

43. Would the energy conservation within a plant cell be severely limited? By the removal of which of the following organelles.

- a) Ribosomes b) Nucleus c) Chloroplast d) Lysosomes

44. Sperms are stored inof the male reproductive system.

- a) Epididymis b) Vas deferens c) Urethra d) Prostate gland

45. LH and FSH are called :

- a) Antistress hormones b) Gonadotropic hormones
c) Emergency hormones d) Neurohormones

Aptitude (15 Marks)

46. Tapeworm is related to Taeniasis in the same way as plasmodium is related to

- a) Malaria b) Constipation c) Diphtheria d) Diarrhoea

Direction (47-49): Find the next number: - ?

47. 48, 24, 16, 12, ?

- a) 6 b) 8 c) 9.6 d) 6.8

48. 4.5, 2.5, 7, 9.5, 16.5 ?

- a) 23 b) 26 c) 28 d) 32

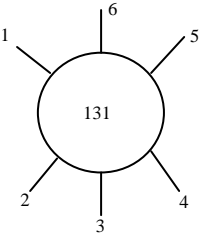
49. 2,1731,3243,4586, ?

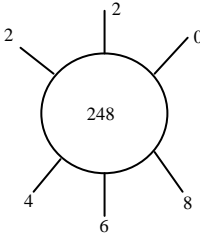
- a) 5802 b) 5906 c) 5704 d) 5608

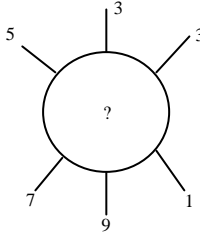
Direction (50): In each of the following questions choose that set of numbers from the four alternative sets, that is similar to the given set.

50. Given set : - (21,51,15)
 a) (21,30,51) b) (21,35,41) c) (21,51,42) d) (21,91,35)
51. In a certain code, PLEADING is written as FMHCQMFB. How is SHOULDER written in that code?
 a) KCDQTIPV b) QDCKVPIT c) QDCKTIPV d) TIPVQDCK
52. Pointing to a photograph, a woman says, “This man’s son’s sister is my mother - in – law”. How is the woman’s husband related to the man in the photograph?
 a) Grandson b) Son c) Son-in-law d) Nephew
53. Suppose you have a clock with minute and hour hands and you switch their places to form another correct time. How many such times can be formed in a clock?
 a) 143 b) 150 c) 144 d) 168

Direction (54-55):- Find the missing term-

- 54.
- 




- a) 132 b) 262 c) 274 d) 320

- 55.
- | | | |
|-----|---|-----|
| 963 | 2 | 844 |
| 464 | ? | 903 |
- a) 1 b) 2 c) 3 d) 4

56. Statements:
 Only Rama is a clerk.
 100% honest are clerk.
- Conclusions:
 i) All honest are Rama.
 ii) All clerks being honest is a possibility.
- a) only conclusion II follows b) only conclusion I follows
 c) both conclusion I and II follows d) Neither conclusion I and II follows

57. Statements:
 All policemen are not corrupt.
 Some politicians are corrupt.
 No banker is a policeman.
- Conclusion:
 i) Some bankers are not corrupt
 ii) Some policemen are not politicians

- a) Only C_2 follow
c) Both C_1 and C_2 follows
- b) Only C_1 follows
d) Neither C_1 nor C_2 follows

Direction (Q58 to Q60): - Study the following information carefully to answer the given questions.

Madan and Rohit are in the same team of hockey. Parth defeated Rohit in badminton but lost to Sachin in tennis. Nitin teams with Sagar in football and with Sachin in hockey. Rohit defeated Sachin in chess. Those who play cricket, do not play badminton, volleyball or tennis. Madan and Parth are in opposite teams of basketball. Nitin represents his state in cricket while Sagar does so at the district level. Boys who play chess, do not play football, basketball or volleyball team. Madan and Parth are together in the volleyball team.

Boys who play football, also play hockey.

58. Name the boys who do not play football.

- a) Sachin, Nitin b) Rohit, Sagar c) Rohit, Sachin d) Rohit, Nitin

59. Who plays both hockey and tennis?

- a) Sachin b) Rohit c) Nitin d) Parth

60. Which is the most popular game with this group?

- a) Cricket b) Hockey c) Football d) Badminton