

DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Maximum Marks: 300

Maximum Time: 90 (+30) minutes



INSTRUCTIONS FOR CANDIDATE

The Question Paper comprises of two sections:

Section I: Multiple Intelligence Test (40 guestions)

- Section II: Scholastic Aptitude Test (100 guestions)
 - Questions in Section I do not carry any marks whereas questions in Section II carry 3 marks each.
- Duration for Section II of this test shall be 90 minutes. You will get additional 30 minutes to fill up information about yourself on the Answer Sheet and answer questions of Section I before start of the exam.
- Answering all questions is compulsory in Section I but not in Section II.Section I of the test contains questions that you need to answer truthfully based on your preference. Do not provide fake responses otherwise you will not receive accurate analysis of your intelligence type.
- Rank will be provided on the basis of Section II. Multiple Intelligence Report shall be provided on the basis of Sec-
- For incorrect answers (in Section II), 1 mark would be deducted. For unanswered questions, no mark would be
- Use of calculator, mobile phones or log tables is not per-
- Fill the required details clearly on the Answer Sheet and
- There is only ONE correct answer. Choose only ONE op-
- To mark your choice of answers by darkening the circles in the Answer Sheet, use an HB Pencil only.
- Rough work should be done in the blank space provided on the last page in the booklet.
- Return the Answer Sheet to the invigilator at the end of
- Write your Roll No. on the Question Paper too.
- Any use of unfair means in the test will result in termina-

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SECTION-II : SCHOLASTIC APTITUDE

QUESTIONS 1 TO 30: MATHEMATICS

- 1. The number is (A) rational
 - (B) irrational(C) both
 - (D) can't say
- 2. If and then
 - **(A)** 34
 - **(B)** 34
 - (C)
 - (D)
- 3. The biggest among the following is
 (A) 21/2
 (B) 31/3
 (C) 61/6
 (D) 81/8
- 4. The common quantity that must be added to each term of a2 : b2 to make it equal to a : b is
 (A) ab
 (B) a + b
 (C) a b
 (D) a/b
- 5. If x + y = 2013 and 1/x + 1/y = 2013, what is the value of xy?
 (A) 1/2013 (B) 4026
 (C) 0 (D) 1
- 7. The Cartesian system is named in honor of the mathematician _____.
 (A) Lesbnitz
 (B) Euclid
 - (C) Rene Descarte
 - (D) Laplace
- **8.** If we multiply or divide both sides of the linear equations with a non zero number, then the solution of the linear equation :
 - (A) Changes
 - (B) Remains the same
 - (C) changes in case of multiplication only
 - (D) changes in case of division only
- 9. If the line ax + by + c = 0 is parallel to x-axis, then which of the following relations is correct? (A) a=0 (B) b=0(C) c=0 (D) a=b

- 10. It is known that if x + y = 10, then x + y + z = 10 + z. The Euclid's axiom that illustrates this statement is: (A) 1st Axiom (B) 2nd Axiom (C) 3rd Axiom (D) 4th Axiom
- 11. Which of the following needs a proof?
 (A) Theorem
 (B) Axiom
 (C) Definition
 (D) Postulate
- 12. One angle forming a linear pair is twice the other. The larger is
 (A) 160°
 (B) 60°
 (C) 120°
 (D) None of these
- **13.** In figure, if AB || DF, AD || FG, \angle BAC = 65°, \angle ACB = 55°, \angle FGH is :



- (A) 65°
 (B) 55°
 (C) 125°
 (D) 115°
- 14. In the following figure, ABCD is a parallelogram in which $\angle A = 60^{\circ}$. If the bisectors of $\angle A$ and $\angle B$ meet at P, then $\angle APB =$



- **15.** PQRS is a cyclic quadrilateral in which PQ||RS, $\angle Q = 65^{\circ}$ then other angles are:
 - (A) 70°, 80°, 120°
 (B) 115°, 115°, 65°
 (C) 110°, 70°, 80°
 (D) None of these

- 16. In the given figure AB|| DE and area of the parallelogram ABFD is 24 cm². Find the area of ΔAFB , ΔAGB and ΔAEB .
 - (A) 8 cm^2 **(B)** 12 cm^2 (C) 10 cm^2 **(D)** 14 cm^2



- 17. Use the following information to answer the next question. In the given figure, D and P are the midpoints of AC and DC respectively. If the area of the shaded portion is 12 cm², then what is the area of $\triangle ABC$?
 - (A) 24 cm^2 **(B)** 36 cm²
 - (C) 48 cm² **(D)** 72 cm²



- 18. If two circles touch each other internally then the distance between their centres is equal to
 - (A) sum of their radii
 - (B) difference of their radii
 - (C) product of their radii
 - (D) smaller of two radii
- 19. Chords MN and RS of a circle intersect at P outside the circle. If PN=3 cm, MN=5
 - cm, PR=2 cm, then the value of SR is equal to
 - (A) 5 cm
 - (B) 8 cm



- **20.** The area of quadrilateral ABCD in which AB = 7cm, BC = 6 cm, CD = 12 cm, DA = 15 cm and AC= 9 cm is: (A) 77.57 cm^2 **(B)** 72.68 cm² (C) 74.98 cm²
 - **(D)** 75.64 cm²
- 21. The lengths of the sides of a triangle are in the ratio 3: 4: 5 and its perimeter is 144 cm. The area of the triangle is: (A) 864 cm² **(B)** 854 cm² **(D)** 873 cm² (C) 816 cm^2

22. If the area of	one face of the cube is 1.5 times its
perimeter, the	e volume (in cm ³) of the cube is
(A) 125	(B) 144
(C) 216	(D) 312

- 23. If the height and the radius of the cone are doubled, then the volume of the cone becomes
 - (A) 3 times
 - (B) 4 times (C) 6 times
 - (D) 8 times
- 24. How many lines of symmetry does a Rhombus have?
 - **(A)** 1
 - **(B)** 4
 - **(C)** 2
 - **(D)** 8
- 25. The median from the ogive curve can be determined by the point on :
 - (A) x-y axis
 - (B) origin
 - (C) y-axis
 - (D) none of these

26. The mean of the following distribution is

Class	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30
Freq.	4	5	7	12	7	5
(A) 15 (B) 16						
$(\mathbf{R}) 15 \qquad (\mathbf{D}) 10 \\ (\mathbf{C}) 17 \qquad (\mathbf{D}) 10 \\ (\mathbf{D}) 10 \\ (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \\ (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \\ (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \\ (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \\ (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \\ (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \\ (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \qquad (\mathbf{C}) 17 \\ (\mathbf{C}) 17 \qquad (C$						
(C) 1/ (D) 18						

- 27. If a dice is rolled then find the probability that number shown on top of dice is less than 7 and greater than 0.
 - **(A)** 0 **(B)** 1
 - (C) 0.5
 - **(D)** 0.75
- 28. A card is drawn at random from a deck of cards. Find the probability of getting the 3 of diamond.
 - (A) 3/52
 - **(B)** 2/52 (C) 1/52
 - **(D)** 4/52

29. The C.P. of 21 articles is equal to S.P. of 18 articles. Find the gain or loss percent.

- (A) 16% **(B)** 8%
- (C) 10%
- **(D)** 12%

30. The difference between compound interest and simple interest for 2 years on RS. 500 at 10%p.a. is (A) RS 0 **(B)** RS 5 (C) RS 10 **(D)** RS 15



QUESTIONS 31 TO 60: SCIENCE

- 31. Examples of vector quantities are:
 - (A) velocity, length and mass
 - (B) speed, length and mass
 - (C) time, displacement and mass
 - (D) velocity, displacement and force
- **32.** A body starts falling from height `h' and travels distance h/2 during the last

second of motion. The time of travel (in sec) is :

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

- **33.** The velocity-time graph of a body moving in a straight line is shown in figure. The displacement and distance travelled by the body in 6 seconds are respectively-
 - (A) 8m, 16m(B) 16m, 8m(C) 16m, 16m(D) 8m, 8m
- 34. Newton's second law of motion is:
 - (A) qualitative
 - (B) quantitative
 - (C) both qualitative and quantitative
 - (D) neither qualitative nor quantitative
- 35. A body of mass 20 kg moves with an acceleration of 2ms-2. The rate of change of momentum in S.I. unit is :
 (A) 40
 (B) 10

(A) 40	(B) 10
(C) 4	(D) 1

- 36. When a space ship is at a distance of two earths radius from the centre of the earth, the gravitational acceleration is
 (A) 19.6 ms⁻²
 (B) 9.8 ms⁻²
 - (C) 4.9 ms⁻²
 - **(D)** 2.45 ms⁻²
- 37. A body floats with 1/3 rd of its volume outside water and 3/4th of its volume outside liquid, then the density of liquid is :

(A) g/cm^3	(B) 0.5 g/cm^3
(C) g/cm ³	(D) g/cm ³

38. Two bodies of mass 1 kg and 4 kg possess equal momentum. The ratio of their K.E.:(A) 4 + 1(B) 1 + 4

(A) 4 : 1	(B) 1:4
(C) 2:1	(D) 1 : 2

- 39. A sonar echo takes 4.4s to return from a submarine. If the speed of sound in water is 1500ms⁻¹, the distance of submarine from the sonar is
 (A) 1500 m(B) 3000 m
 (C*) 3300 m
 (D) 3600 m
- **40.** The equipment (device) used for locating the position and distance of an object inside sea, using ultrasound is called-

(A) Pukar	(B) Upkar
(C) Radar	(D) Sonar

- **41.** Which of the following statements does not go with the liquid state?
 - (A) Particles are loosely packed in the liquid state.
 - (B) Fluidity is the maximum in the liquid state.
 - (C) Liquids can be compressed.

(D) Liquids take up the shape of any container in which these are placed.

- 42. Pressure of air at sea level is(A) one atmosphere
 (B) 76 cm of Hg
 (C) 760 mm of Hg
 (D) All of these
- **43.** Two elements A (atm. wt. 75) and B (atm wt. 16) combine to yield a compound, the percentage by weight of A in the compound was found to be 75.08. The formula of the compound is-

(A) AB	(B) AB ₂
(C) A ₂ B	(D) $A_2 \overline{B}_3$

- 44. Which of the following is the formula of nitrate ion? (A) N^3 (B) NO_3^- (C) NO^+ (D) NO_2^+
- 45. In an atom there are four orbits, the maximum number of electrons in this atom will be
 (A) 30
 (B) 32
 (C) 36
 (D) 62
- 46. An isotone of Ge is
 (A) Ge
 (B) As
 (C) Se
 (D) Se
- 47. Mixture of zinc dust and dry ice can be purified by-(A) distillation(B) filtration(C) sublimation
 - (D) sedimentation

48.	The particle size of order of – (A) 10 ⁻⁶ m (C) 10 ⁻⁸ m	 solute in true solution is of the (B) 10⁻⁷m (D) 10⁻⁹m 	55.	Which of the followi (A*) Kingdom, div (B) Phylum, divisi (C) Kingdom, gen (D) Phylum, kingd	ings are correct order of hierarchy? ision, phylum, genus and species on, genus and class us, class, phylum and division lom, genus, species and class
49.	The melting point a substance is 40°C of the liquid state of (A) 35°C (C) 45°C	 temperature of the solid state of 2. The freezing point temperature of the same substance will be : (B) 40°C (D) can't predict 	56.	Who was the first to unit of classification (A) Candolle (C) Linnaeus	to describe that species is the on? (B) Huxley (D) John Ray
50.	 Which of the following would weigh the highest ? (A) 0.2mole of sucrose (C12H22O11) (B) 20moles of water (C) 2moles of CaCO3 (D) 10moles ofH2O 		57.	The 'B' and 'T'-cells system are produce (A) Bone morrow (B) Spleen (C) Lymph nodes (D) Bone marrow	that are critical for immune ed in- cells and Thymus
51.	Which of the follo found in a plant ce (A) Chloroplast (C) Food vacuole	wing organelles would not be ll? (B) DNA (D) Cellmembrane	58.	AIDS is caused by (A) blood cancer (C) bacterium	(B) HTLV-III (D) TMV
52.7	Thickness of plasma (A) 75 Å (C) 125 Å	a membrane (unit membrane) is (B) 100 Å (D) 150 Å	59 . [•]	Which of the follow (A) Bajra (C) Wheat	ring is a Rabi cereal? (B) Jawar (D) All the above
 53. Parenchyma has (A) intercellular spaces and uniform thickening (B) deposition on corners (C) deposition on angles (D) deposition in form of bands 		60.	 Cycling of elements (A) Chemical cycle (B) Geochemical c (C) Biogeochemic (D) Geological cycle 	s in an ecosystem is called? e cycle al cycle cle	
54.	Squamous epitheli	umis found in			

(A) trachea (B) lungalveoli

(C) alimentary canal (D) oviduct

QUESTIONS 61 TO 80: LOGICAL REASONING

Direction (61- 62): In the figure given below, there are three intersecting circles each representing certain section of people. Different regions are marked a - g. Read the statements in each of the following questions and choose the letter of the region which correctly represents the statements.



61. Painters who are neither Chinese nor musicians

(A) b	(B) c
(C) f	(D) g

- 62. Chinese who are painters as well as musicians (A) a (B) b
 - (C) c (D) d
- 63. Rohan ranks seventh from the top and twenty-sixth from the bottom in a class. How many students are there in the class?
 (A) 31
 (B) 32
 (C) 33
 (D) 34

64. How many 3s are there in the following sequence which are neither preceded by 6 nor immediately followed by 9? 9 3 6 6 3 9 5 9 3 7 8 9 1 6 3 9 6 3 9

936639593	8789163963
(A) One	(B) two
(C) Three	(D) Four

65. In each of the following questions, choose the correct mirror-image of the Fig. (X) From amongst the four alternatives 1, 2, 3 and 4 given along with it. The mirror represented by a line M_1M_2



Directions (66-68): Study the following information carefully and answer the questions below. A team of five is to be selected from amongst five boys A, B, C, D and E and four girls P, Q, R and S. Some criteria for selection are – A and S have to be together P cannot be put with R. D and Q cannot go together. C and E have to be together. R cannot be put with B.

Unless otherwise started, these criteria are applicable to all questions below

- **66.** If two of the members have to be boys, the team will consist of
 - (A) ABSPQ(B) ADSQR
 - (C) BDSRQ
 - (D) CESPQ
- **67.** If two of the members are girls and D is one of the members, the members of the team other than D are

(A) PQBC	(B) PQCE
(C) PSAB	(D) PSCE

- **68.** If including P at least three members are girls, the members of the team other than P are
 - (A) QSAB
 - (B) QSBD
 - (C) QSCE
 - (D) RSAD

- 69. Study the three dices given below. What number will be opposite to the side bearing number 2?(A) 4 (B) 3 (C) 6 (D) 5
- 70. Find the term which does not fit into the series given below.
 G4T, J10R, M20P, P43N, S90L
 (A) G4T
 (B) J10R
 (C) M20P
 (D) P43N
- 71. In each of the following questions, one term in the number series is wrong.
 Find out the wrong term.
 6, 15, 35, 77, 165, 221
 (A) 35
 (B) 77
 (C) 165
 (D) 221
- 72. In each of the following questions, one term in the number series is wrong.
 Find out the wrong term.
 2, 6, 24, 96, 285, 568, 567
 (A) 6
 (B) 24

() - ()	<i>2</i> 1
(C) 285 (D)	567

- 73. Find the missing term.
 1, 3, 12, 27, ?
 (A) 90
 (B) 73
 (C) 48
 (D) 36
- 74. Find the missing term.
 1, 3, 10, 21, 64, 129, 388, ?
 (A) 776
 (B) 777
 (C) 1164
 (D) 1165
- 75. The following questions consist of two words each that have a certain relationship to each other, followed by four lettered pairs of words. Select the lettered pair that has the same relationship as the original pair of words. Circle : Diameter

 (A) Rectangle : Diagonal
 (B) Diameter : Radius
 (C) Square : Rectangle
 (D) Bisector : Angle

 76. In each of the following questions, choose that set
- 76. In each of the following questions, choose that set of numbers from the four alternative sets, that is similar to the given set. Given set : (6, 36, 63)
 (A) (7,49, 98)
 (B) (8, 64, 46)
 (C) (9, 84, 45)
 (D) (11, 111, 84)

77. In each of the following questions, five groups of letters are given. One of these groups is different from the other four. Find the odd one.

(A) ECBFD	(B) LQPOM
(C) WSVTU	(D) ROQNP

- **78.** In each of the following questions, five groups of letters are given. One of these groups is different from the other four. Find the odd one.
 - (A) Kiwi
 - (B) Penguin
 - (**C**) Emu
 - (D) Eagle
- **79.** Each of the following questions consists of five figures marked A, B,C, D and E called the Problem Figures. Select a figure from amongst the Answer Figure which will continue the same series as established by the five Problem Figures.



80. Each of the following questions consists of five figures marked A, B,C, D and E called the Problem Figures. Select a figure from amongst the Answer Figure which will continue the same series as established by the five Problem Figures.



QUEUTIONO UTTO 100.	
 81. The SKILLS 2015 – International Conference will be held in which city? (A) Jaipur (B) Bangalore (C) Ahmedabad (D) Hyderabad 	 87. The term 'Doha Round of Negotiations', is related to which of the following organisations? (A) G20 (B) IAEA (C) WTO (D) ASEAN
 82. 'Ek Kadam Unnati Ki Aur' campaign is launched by which company in Telangana state? (A) Infosys (B) Intel (C) Flipkart (D) Wipro 	 88. What is the India's rank in Global Gender Gap Index for 2015? (A) 75 (B) 90 (C) 99 (D) 108
 83. India's first mega silk cluster will come up in which Indian state? (A) Assam (B) Karnataka (C) West Bengal (D) Andhra Pradesh 	 89. ICFT- UNESCO Fellini Prize is related to which one of the following fields? (A) Architecture (B) Films (C) Literature (D) Science
 84. Which day is observed as the International Day of Persons with Disabilities? (A) November 17 (B) November 20 (C) November 26 (D) December 3 	 90. Satellite EKS Kosmos-2510 was launched by which one of the following countries? (A) Japan (B) South Korea (C) North Korea (D) Russia
 85. What is WT1190F? (A) Humanoid Robot (B) Space Junk (C) Super Computer (D) A Type of Virus 	 91. What is GJ1132b? (A) Super Computer (B) Exoplanet (C) Satellite (D) Electronic Chip 92. Who was the author of the book 'Inside IB and
 86. What is the India's rank in 2015 Global Hunger Index (GHI) report? (A) 55 (B) 65 (C) 70 (D) 80 	 RAW: The Rolling Stone That Gathered Moss'? (A) Ashok Chaturvedi (B) Vikram Sood (C) Shankaran Nair (D) K C Verma

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- 93. 'Basel-III reforms' are related to which of the following?(A) Banking
 - (**B**) Environment
 - (B) Environment
 - (C) Sustainable development
 - **(D)** Disaster management
- 94. Who among the following Indian personalities is the co-author of the released book 'The Great Indian Diet'?
 (A) Shilpa Shetty (B) Amitabh Bachhan (C) Daboo Malik (D) Mahesh Bhatt
- 95. 'World Chronic Obstructive Pulmonary Disease Day' for Year 2015 was observed on which date?(A) 16 November (B) 17 November
 - (C) 18 November (D) 19 November
- **96.** What is the India's rank in the Global Terrorism Index (GTI) 2015?

(A) 4th	(B) 6th
(C) 8th	(D) 10th

- 97. On which date, World Fisheries Day is observed?
 (A) November 15 (B) November 17
 (C) November 19 (D) November 21
- 98. In context to the Indian defence system, 'Nishant' refers to which one of the following?
 (A) Torpedo Defence System
 (B) Intercontinental Ballistic Missile
 (C) Unmanned Aerial Vehicle
 (D) Autonomous Underwater Vehicle
- 99. Which country hosted the 2015 ASEAN summit?
 (A) Singapore
 (B) Indonesia
 (C) Vietnam
 (D) Malaysia
- 100.Who has won the 2015 Reporters without Borders Prize?
 (A) Nizar Nayyouf
 (B) Zaina Erhaim
 (C) Wang Juntao
 (D) Reza Alijani

ROUGH WORK

ROUGH WORK





SECTION-I

MULTIPLE INTELLIGENCE TEST

SECTION-II

APTITUDE TEST

▶ MATHEMATICS

▶ LOGICAL REASONING

SCIENCE

GENERAL KNOWLEDGE

MULTIPLE INTELLIGENCE TEST

Section-I: Multiple Intelligence Test

Directions : (1 to 35) These are general statements. You have to mark options A, B, C or D in the OMR sheet as per your preference.

A = Mostly Disagree

_ _ _ _ _ _ _ _ _

- **B** = Slightly Disagree
- **C** = Slightly Agree
- **D** = Mostly Agree
- 1. I enjoy word games like Scrabble and crossword puzzles.
- 2. I can easily add numbers in my head.
- 3. People say I have a good singing voice.
- 4. I like to listen to someone read a story aloud.
- 5. I like to spend time alone.
- 6. I use my hands a lot when talking or describing something.
- 7. I prefer books that have lots of pictures.
- 8. The best thing about school is getting to be with my friends all day.
- 9. I know a song after hearing it only once or twice.
- 10. I enjoy doing experiments.
- 11. It's easy for me to write 150 words or more for an essay.
- 12. I enjoy board games such as chess or checkers.
- 13. I study better if music is playing.
- 14. I like to act things out.
- 15. I enjoy making things with clay or play dough.
- 16. I have more than one favorite teacher.
- 17. I like school activities to follow the same order each day.
- 18. I listen to music on radio, cassettes, or CD's often.
- 19. I doodle or draw often during class.

- 20. Reading charts, maps, and graphs is easy.
- 21. I know what I want to be when I grow up and what I need to do to become it.
- 22. I have a secret place.
- 23. English and Social Studies are my best subjects.
- 24. I automatically tap my feet or hands along with music.
- 25. It's easy for me to remember names.
- 26. My friends ask me to help them with their prob lems.
- 27. I like to watch TV or movies.
- 28. I love to run, jump, or dance.
- 29. Math and Science are my best subjects.
- 30. I like to play games with other people.
- 31. I like art activities.
- 32. I have 2 or more "best" friends.
- 33. Adults say I'm stubborn or strong-willed.
- 34. It's hard to sit still for long periods of time.
- 35. I like to do my work alone.

Directions : (36 to 40) These are general statements. You have to mark options A, B, C or D in the OMR sheet as per your preference.

- A = Very Frequently
- **B** = Occasionally
- **C** = Rarely
 - **D** = Very Rarely
- 36. I use computer.
- 37. I use internet for studies.
- 38. I play games on computer.
- 39. I watch movies on computer.
- 40. I wish to use computers for overall knowledge enhancement.

Que.- 60

SECTION-II: SCHOLASTIC APTITUDE TEST

QUESTIONS 1 TO 20: MATHEMATICS

- 1. The three rational numbers between 3 and 4 are: (A) 5/2, 6/2, 7/2
 - (B) 13/4, 14/4, 15/4
 - (C) 12/7, 13/7, 14/7
 - (D) 11/4, 12/4, 13/4
- 2. $\sqrt{9}$ is a _____ number.
 - (A) Rational
 - (B) Irrational
 - (C) Neither Rational nor Irrational
 - (D) None of the above
- 3. Find p(0), p(1) and p(2) of the following polynomials: p(t) = t3 + 5 t2 3 t 2
 (A) 2, 1, -20
 (B) -2, 1, 20
 (C) 2, -1, -20
 (D) 2, 1, 20
- 4. Geeta's age is 3 years more than thrice m, the age of Meeta. Write an equation of first degree to display this information.
 - (A) g + 3 = 3m
 - (B) g 3 = 3m
 - (C) g + 3m + 3 = 0(D) g - 3m + 3 = 0
- 5. Which among these is the relation between whole and the part?
 - (A) $W \leq P$
 - (B) W > P
 - (C) W = P
 - (D) None of these
- 6. If B lies on line AC and points A, B and C are distinct such that, AB + BC = AC, then
 (A) AB < AC
 (D) AB > AC
 - (B) AB > AC
 - (C) AB = AC
 - (D) None of these
- 7. ABCD is a parallelogram, if the two diagonals are equal, then by what criterion are the triangles ABD and ABC congruent



8. PQRS is a parallelogram, if the two diagonals are equal, then the measure of DPQR is:

- (A) 30°
- (B) 90°
- (C) 60°
- (D) 120°
- 9. Which of the following is not a parallelogram?
 - (A) Rectangle
 - (B) Trapezium
 - (C) Rhombus
 - (D) Square
- 10. A triangular park ABC has sides 120 m, 80 m and 50 m. A gardener, Dhania has to put a fence all around it and also plant grass inside. The area required and the cost of fencing it with barbed wire at the rate of Rs. 20 per metre leaving a space 3 m wide for a gate on one side will be
 - (A) $275\sqrt{15m^2}$, 4897 (B) $275\sqrt{15m^2}$, 4490 (C) $375\sqrt{15m^2}$, 4940
 - (D) $275 \sqrt{15m^2}$, 5263
- 11. The area of triangle, whose sides are 15 cm, 25 cm and 14 cm:

(A)	$18\sqrt{26cm^2}$	(B) $15\sqrt{29cm^2}$
(C)	$17\sqrt{23}$ cm ²	(D) $20\sqrt{26cm^2}$

- 12. The area of a right triangle with base 5 m and altitude 12 m is
 - $\begin{array}{ll} (A) \ 15 \ m^2 & (B) \ 9 \ m^2 \\ (C) \ 50 \ m^2 & (D) \ 30 \ m^2 \end{array}$
- 13. A frequency distribution is defined as

 (A) distribution with tally marks
 (B) a rough arrangement of data
 (C) tabular arrangement of data by classes together with the corresponding class frequencies
 (D) arrangement of frequencies with class size

 14. Number of runs scored by a cricket player in 25

14. Number of runs scored by a cricket player in 25 innings are as follows:
26, 35, 94, 48, 82, 105, 53, 0, 39, 42, 71, 0, 64, 15, 34, 67, 0, 42, 124, 84, 54, 48, 139, 64, 47. The number of centuries scored by him is
(A) 1 (B) 3
(C) 5 (D) 0

15. In the following data, the number of class intervals, (by inclusive method), and taking 4 as the magnitude of class intervals will be31, 23, 19, 29, 22, 20, 16, 10, 13, 34

- 38, 33, 28, 21, 15, 18, 36, 24, 18, 15 12, 30, 27, 23, 20, 17, 14, 32, 26, 25
- 18, 29, 24, 19, 16, 11, 22, 15, 17, 10
- (A) 10 (B) 7
- (C) 8 (D) 9
- 16. The decimal expansions that correspond to rational numbers is.
 - (A) Terminating
 - (B) Recurring
 - (C) Either terminating or recurring
 - (D) Both terminating and r recurring
- 17. The ratio of the sum of observations and the total number of observations is called:
 - (A) Mean (B) Median
 - (C) Mode (D) Central tendency
 -

- 18. The median of the data: 155, 160, 145, 149, 150, 147, 152, 144, 148 is
 - (A) 149 (B) 150 (C) 147 (D) 144
- 19. The sides of a triangle are 122 m, 22 m and 120 m respectively. The area of the triangle is:
 - (A) 1320 sq.m
 - (B) 1300 sq.m
 - (C) 1400 sq.m
 - (D) 1420 sq.m
- 20. Two angles whose sum is equal to 180° are called:
 - (A) Vertically opposite angles
 - (B) Complementary angles
 - (C) Adjacent angles
 - (D) Supplementary angles

QUESTIONS 21 TO 40: SCIENCE

- 21. Which of the following are the main states of matter?(A) Liquid, Solid, Foam
 - (B) Liquid, Gas, Gel
 - (C) Liquid, Solid, Gas
 - (D) Liquid, Foam, Gel
- 22. What is the S.I unit of acceleration?

(A) m / s	(B) m/s2
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- (C) m/s3 (D) ms2
- 23. Liquids are called fluids because:

(A) Particles of a liquid have no force of attraction between them.

(B) Particles of a liquid have spaces between them.(C) Liquids do not fill the whole container in which

- they are placed.
- (D) Liquids can flow.
- 24. A stream of water cannot be cut by fingers.



(A) Particles of matter attract each other.

- (B) Particles of matter have spaces between them.
- (C) Particles of matter are continuously moving.

(D) None of the above

25. Look at the figure given below.



The increasing dilution of potassium permanganate solution with water fades the pink colour of the solution. This explains which property of matter?

- (A) Matter is indivisible.
- (B) Particles of matter are very small.
- (C) Particles of matter occupy space.
- (D) Particles of matter are in continuous motion.
- 26. Sponge is a solid yet we are able to compress it. Why?

(A) A sponge is a porous substance in which water is trapped.

(B) A sponge is hollow solid in which air is trapped.

(C) A sponge is a delicate solid in which oxygen gas is trapped.

(D) A sponge is a solid that has minute holes in which air is trapped.

- 27. When we put a drop of ink in water taken in a glass, it spreads in the water making the water in glass entirely coloured. Which property of matter does it exhibit?
 - (A) Particles of matter have spaces between them.
 - (B) Matter consists of large number of particles.
 - (C) Particles of matter are very small in size.
 - (D) Particles of matter are continuously moving.
- 28. What happens when we make tea, coffee or lemonade?

(A) Particles of one type of matter don't get mixed up with particles of other type of matter.

(B) Particles of one type form a layer over another type of matter.

(C) Particles of one type of matter form a covering around the particles of other type of matter.

(D) Particles of one type of matter get into the spaces of the other type of matter.

29. Which of the following state has maximum intermolecular forces of attraction?



- (A) Water
- (B) Water vapour
- (C) Ice
- (D) Same in all states of matter.
- 30. is not unicellular organism
 - (A) Cactus(B) Chlamydomonas(C) Paramecium(D) Bacteria
- 31. If an object moves 4 km in a straight line then the value of displacement is....

(A)	4 km	(B)	8	km
$\langle \alpha \rangle$	101		~	1

- (C) 12 km (D) 0 km
- 32. Which of the following is the example of uniform motion.
 - (A) Zig-zag motion of butterfly
 - (B) Motion of aero plane before take off
 - (C) Motion of periods of soldiers.
 - (D) Motion of fan after switch off.

- 33. Newton's first law introduces the concept of —-.(A) Momentum
 - (B) Inertia
 - (C) Conservation of energy
 - (D) Action and reaction
- 34. The unit of power is
 - (A) HP (B) J/S
 - (C) Kilowatt (D) All of the above
- 35. The stone of mass 3.5 kg has height of 165 cm. Calculate potential energy contained in that stone.
 - (A) 52.6 J (B) 54.6 J
 - (C) 56.6 J (D) 58.6 J
- 36. Newspapers made from.....
 - (A) proteins
 - (B) cellulose
 - (C) carbohydrates
 - (D) vitamins
- 37. White revolution deals with.....
 - (A) Agriculture
 - (B) Milk production
 - (C) Indigo production
 - (D) Rice production
- 38. Rice, maize, sorghum, provides us for energy requirement
 - (A) Proteiens
 - (B) Crabohydrates
 - (C) Vitamins
 - (D) Amino acids
- 39. The revolution of the electron in a circular orbit is not expected is not expected to be stable.
- (A) It is drawback of Dalton
- (B) It is drawback Rutherford's
- (C) It is drawback Mendeleev's
- (D) None of the above
- 40. Choose incorrect option
- (A) Isotope of uranium used as fuel in nuclear reactor
- (B) Isotope of cobalt is used in food preservatives
- (C) Isotopes of iodine is used for treatment of goitre
- (D) Isotope of 'Co' used in the treatment of cancer



QUESTIONS 41 TO 50: LOGICAL REASONING

Direction (41- 42): In the figure given below, there are three intersecting circles each representing certain section of people. Different regions are marked a - g. Read the statements in each of the following questions and choose the letter of the region which correctly represents the statements.



- 41. Painters who are neither Chinese nor musicians
 (A) b
 (B) c
 (C) f
 (D) g
- 42. Chinese who are painters as well as musicians (A) a (B) b (C) c (D) d
- 43. How many 3s are there in the following sequence which are neither preceded by 6 nor immediately followed by 9?

93663959	37891639639
(A) One	(B) two
(C) Three	(D) Four

44. In each of the following questions, choose the correct mirror-image of the Fig. (X) From amongst the four alternatives 1, 2, 3 and 4 given along with it. The mirror represented by a line M1M2





(A) 1 (B) 2 (C) 3 (D) 4

Directions (45-47): Study the following information carefully and answer the questions below. A team of five is to be selected from amongst five boys

A, B, C, D and E and four girls P, Q, R and S.

Some criteria for selection are -

A and S have to be together

P cannot be put with R.

D and Q cannot go together.

C and E have to be together.

R cannot be put with B.

Unless otherwise started, these criteria are applicable to all questions below

45. If two of the members have to be boys, the team will consist of

(A) ABSPQ	(B) ADSQR
(C) BDSRQ	(D) CESPQ

- 46. If two of the members are girls and D is one of the members, the members of the team other than D are (A) PQBC (B) PQCE (C) PSAB (D) PSCE
- 47. If including P at least three members are girls, the members of the team other than P are
 (A) QSAB
 (B) QSBD
 (C) QSCE
 (D) RSAD
- 48. Study the three dices given below. What number will be opposite to the side bearing number 2?

49. Find the term which does not fit into the series given below.

G4T, J10R, M20P, P43N, S90L (A) G4T (B) J10R (C) M20P (D) P43N

50. Each of the following questions consists of five figures marked A, B,C, D and E called the Problem Figures. Select a figure from amongst the Answer Figure which will continue the same series as established by the five Problem Figures.



QUESTIONS 51 TO 60: GENERAL KNOWLEDGE

 51. 'Great Barrier Reef' is the world's largest coral reef system, located in which country? (A) Australia (B) Japan (C) Indonesia (D) Philippines 	 56. What is the name of the harvest festival celebrated before Makar Sankranti? (A) Lohri (B) Majuli (C) Wangala (D) Chhath Puja
 52. UNESCO has suggested adding which city to its list of world heritage centres in danger? (A) New Delhi (B) Rome (C) Venice (D) Paris 	 57. Kala Ghoda Art Festival, which was seen in the news, is held at which city? (A) New Delhi (B) Mumbai (C) Kolkata (D) Bhopal
 53. Bindeshwar Pathak, who passed away recently, was associated with which field? (A) Politics (B) Social Work (C) Sports (D) Science 	 58. What is the name of the new chatbot launched by the Unique Identification Authority of India (UIDAI)? (A) UIDAI Bharat (B) Aadhaar Mitra (C) Aadhaar Disha (D) Aadhaar Prashna
 54. Which Union Ministry organised the Swar Dharohar festival? (A) Ministry of Culture (B) Ministry of Tourism (C) Ministry of MSME (D) Ministry of External Affairs 	 59. Who has been elected as the first female president of Indian Olympic Association (IOA)? (A) Mary Kom (B) P T Usha (C) Karnam Malleswari (D) Anju George
 (A) Arunachal Pradesh (B) Assam (C) Kerala (D) Goa 	 60. Suryakumar Yadav, who was seen in the news, is associated with which sports? (A) Chess (B) Cricket (C) Badminton (D) Tennis

ROUGH WORK



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