GOVERNMENT OF JHARKHAND
DEPARTMENT OF HUMAN RESOURCES DEVELOPMENT

AND

JHARKHAND ACADEMIC COUNCIL
RANCHI

NATIONAL TALENT SEARCH EXAMINATION (PRELIMINARY) 2014-15

CLASS-X

MENTAL ABILITY TEST AND SCAOLASTIC APTITIUDE TEST

2ND NOVEMBER 2014

JHARKHAND ACADEMIC COUNCIL,
RANCHI, JHARKHAND
NATIONAL TALENT SEARCH EXAMINATION (PRELIMINARY) 2014-15
Class X
MENTAL ABILITY AND SCHOLASTIC APTITUDE TEST

Part I : Time 45 Minutes — Max. Marks : 50
Part II (a) : Time 45 Minutes — Max. Marks : 40
Part II (b) : Time 90 Minutes — Max. Marks : 90

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you answer the questions. Answers are to be given on a separate) O.M.R. Answer-Sheet.

1. Please write your Roll No, very clearly (only one digit in one block) as given on your admission card. Please see that no block is left unfilled and even zeros appearing in the Roll No. are correctly transferred to the appropriate blocks on the booklet and on the answer-sheet. For example, a student appearing from Ranchi with Roll Number 221150101001 will make entries in the boxes as under :

Roll. No.	2	2	1	1	5	0	1	0	1	0	0	1

For all subsequent purposes your Roll No. shall remain the same as given on the admission card.

2. This test is in two Parts. Part I consists of 50 questions and Part II (a) consists of 40 questions and Part II (b) consists of 90 questions.
3. All questions in Part I and Part II carry one mark each and are compulsory.
4. Since all questions are compulsory, do not try to read through the whole question-paper before beginning to answer it.
5. Begin with the first question and keep on trying one question after another till you finish both the parts.
6. If you do not know the answer to any question, do not spend much time on it and pass on to the next one. Time permitting, you can come back to the questions which you have left in the first instance and try them again.
7. Since the time allotted to the two parts of this question-paper is very limited, you should make the best use of it by not spending too much time on any question.
8. A blank page has been provided for rough-work at the end of each subject.
9. **Remember you have to mark your answers on a separate O.M.R. Answer-Sheet as per instructions given below :**
10. The answer-sheet has two parts : Part I and Part II corresponding to Part I and Part II of the test. The answer-sheet comprises two printed columns, one for answering the Mental Ability Test questions and the other for answering the Scholastic Aptitude Test Part II (a) and Part II (b) questions. The answers to the Mental Ability Test questions are to be given on the Mental Ability column and those of the Scholastic Aptitude Test questions on the Scholastic Aptitude column. Marks will not be awarded, if the answers are not entered in proper columns.
11. Answer to each question is to be indicated by darkening the circle by blue or black ball pen only, the number of the correct alternative in the answer-sheet from amongst the ones given for the corresponding question in the test booklet.
12. Now turn to the next page and start answering the questions.

N. B.: Do not write anything except the Roll Number in the Booklet.

Part I
Mental Ability Test

Time : 45 Minutes **Max Marks : 50**

DIRECTION

1. All the questions of this part are related to the subjects of Mental Ability Test.
2. Before answering the questions, read these directions very carefully.
3. This part contains 50 questions.
4. Each question carries one mark.
5. Answer to all the questions is essential.
6. The questions are to be answered on the O.M.R. Answer Sheet supplied in the Examination Hall.
7. Every question has four alternatives, of which only one is correct.
8. Answer to each question is to be indicated by darkening the circle, by blue or black ball pen only, the number of the correct alternative in the O.M.R. Answer Sheet from amongst the ones given for the corresponding question in the Test (Question) Booklet.

Please Turn Over the Page and Start Your Work.

MENTAL ABILITY TEST

Instruction for Q. No. 1 to 5: In each of the following questions, four groups of letters are given. Three of them are alike in some manner, while one is different. Find the odd-man-out and mark it on your answer-sheet as directed.

Q1. (1) ARYQB (2) CTZSD (3) EVYUF (4) GVZWE

Q2. (1) AJNAUO (2) BTMIAE (3) DNLUEO (4) CEKAIO

Q3. (1) IRAJS (2) BKTCL (3) UCGNX (4) UDMVE

Q4. (1) XECSQ (2) GNUBI (3) PWDKR (4) YFMTA

Q5. (1) FLRXD (2) ECGSY (3) JPVBH (4) NTZFL

Instruction for Q. No. 6 to 10: In each of the following questions, group of numbers are given. They are alike in some manner, while one number is wrong. Find out the odd-man-out and mark it on your answer-sheet as directed.

Q6. 8, 14, 26, 48, 98, 194, 386
(1) 48 (2) 386 (3) 8 (4) 194

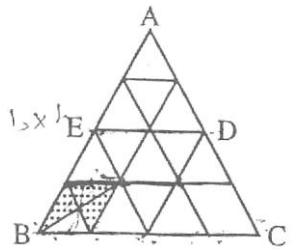
Q7. 3, 10, 27, 4, 16, 64, 5, 25, 125
(1) 10 (2) 16 (3) 27 (4) 5

Q8. 529, 361, 289, 171, 121, 49
(1) 361 (2) 49 (3) 171 (4) 529

Q9. 336, 210, 120, 62, 24, 6, 0
(1) 62 (2) 6 (3) 210 (4) 24

Q10. 3, 28, 9, 13, 22, 18, 32, 23, 42
(1) 3 (2) 18 (3) 9 (4) 42

Instruction for Q. No. 11 to 15: All the questions given below are based on a figure. All the triangles in the figure are equilateral. The area of the shaded part, in the figure, is equal to 2 square units. Based on these information answer the questions given below.



Q11. The area of the figure BCDE will be
(1) 15 square units (2) 14 square units
(3) 16 square units (4) $16\frac{1}{2}$ square units.

Q12. The area of total figure will be

(1) $21\frac{1}{3}$ square units (2) 32 square units

(3) $10\frac{2}{3}$ square units (4) 36 square units

Q13. The area of total figure will be

(1) $9\frac{1}{3}$ square units (2) $10\frac{1}{2}$ square units

(3) $10\frac{2}{3}$ square units (4) $9\frac{2}{3}$ square units

Q14. The shaded part of the total area will be

(1) $\frac{2}{32}$ (2) $\frac{2}{24}$ (3) $\frac{3}{32}$ (4) $\frac{6}{16}$

Q15. The ratio of the area of the shaded and unshaded part will be

(1) 3:92 (2) 3:25 (3) 3:31 (4) 3:29

Instruction for Q. No. 16 to 19: In each of the following questions, a group of letters is given, which are numbered differently. Below four alternatives are given, containing combination of these numbers. Select that combination of numbers which form a meaningful word.

Q16. tiynpmui
17845362
(1) 51236748 (2) 23564718 (3) 62134857 (4) 38715246

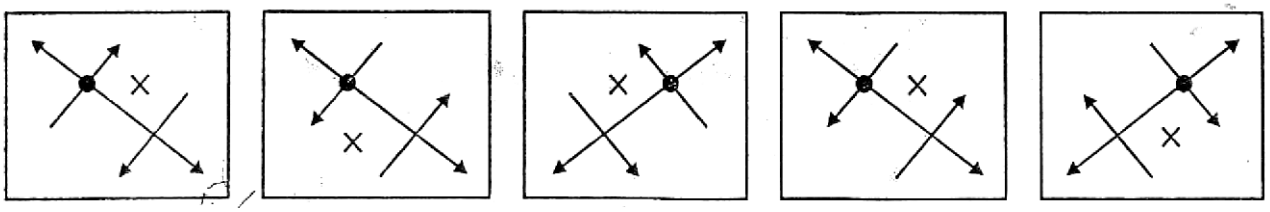
Q17. talegcyh
35782641
(1) 41735628 (2) 17865423 (3) 74612538 (4) 86732154

Q18. zremioh
1234567
(1) 2751643 (2) 3712456 (3) 1246537 (4) 4653127

Q19. oyepcanst
123456789
(1) 358914269 (2) 827514693 (3) 563478192 (4) 567123489

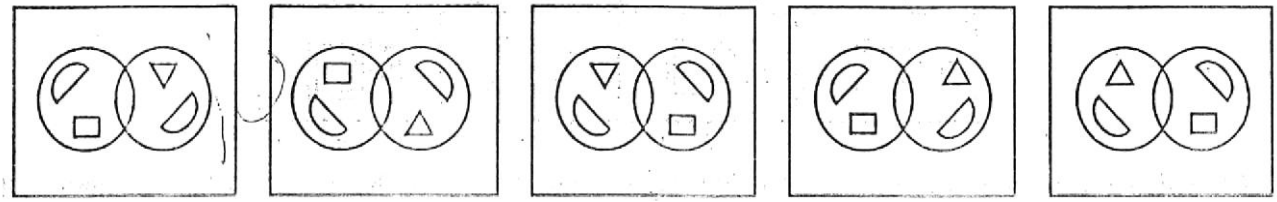
Instruction for Q. No. 20 to 22: In each of the following questions, choose the correct mirror-image of the figure(x) from amongst the four alternatives 1, 2, 3 & 4 given along with it.

Q20



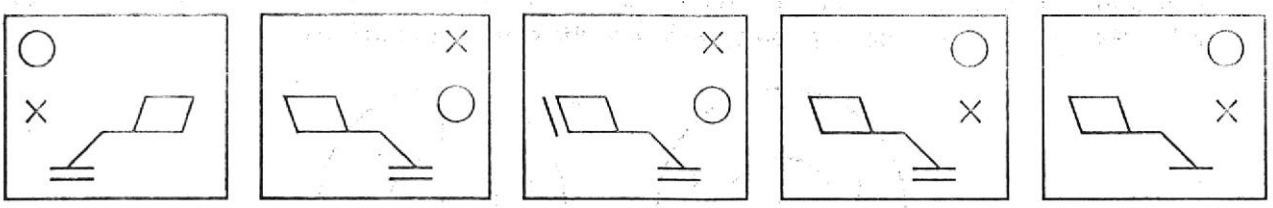
X 1 2 3 4

Q21



X 1 2 3 4

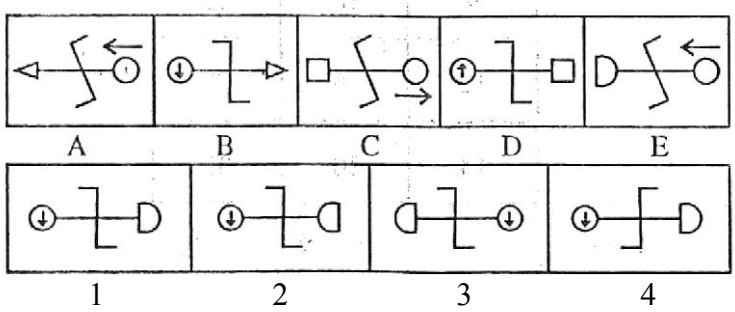
Q22



X 1 2 3 4

Instruction for Q. No. 23 to 26: In each of the following questions, find the figure from the answer-set (i.e. 1, 2, 3 and 4) which will continue the series given in the problem-set(i.e. A, B, C, D and E)

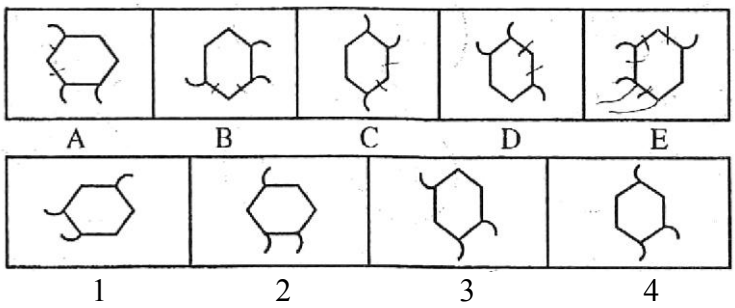
Q23.



A B C D E

1 2 3 4

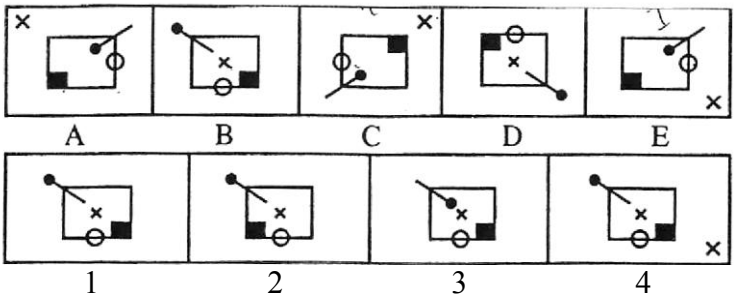
Q24.



A B C D E

1 2 3 4

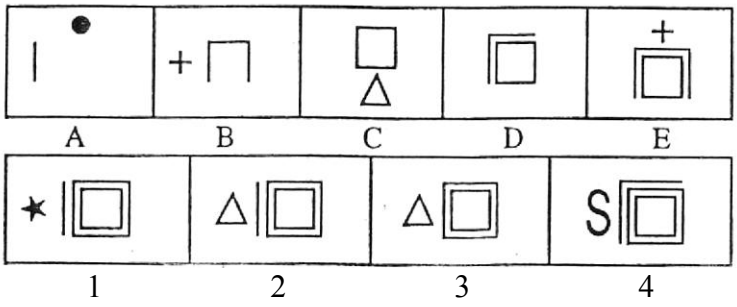
Q25.



A B C D E

1 2 3 4

Q26.

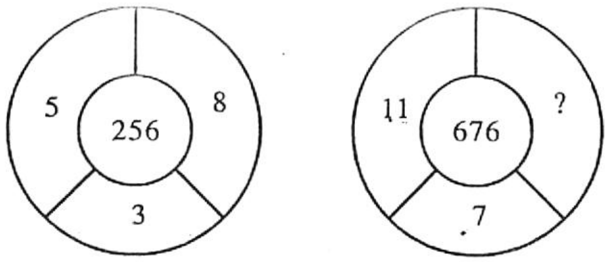


A B C D E

1 2 3 4

Instruction for Q. No. 27 to 29: Study the pattern of numbers in the following questions and select the missing number in place of question mark (?). Mark the correct alternative on your answer sheet as directed.

Q27.



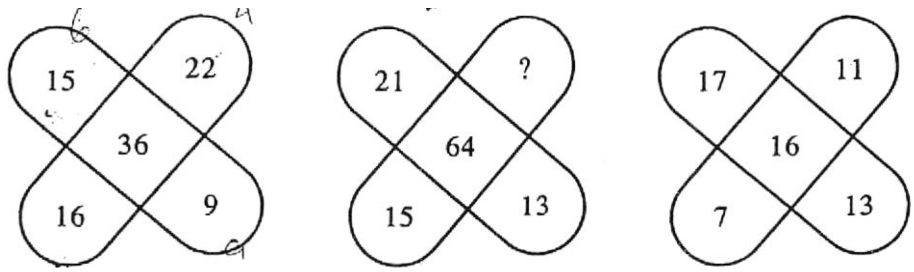
(1) 8 (2) 13 (3) 7 (4) 12

Q28.

9	10	12
12	16	?
14	20	32

(1) 30 (2) 24 (3) 28 (4) 18

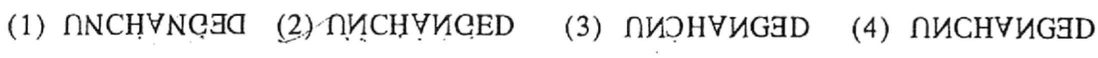
Q29.



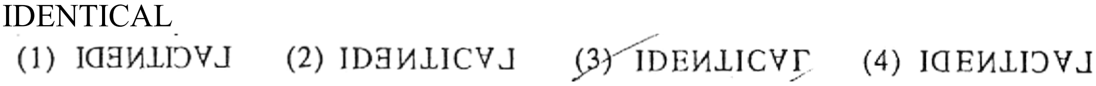
(1) 23 (2) 27 (3) 21 (4) 25

Instruction for Q. No. 30 to 33: In each of the following questions choose the correct water-image of the given words/numbers from amongst the four alternatives.

Q30. UNCHANGED

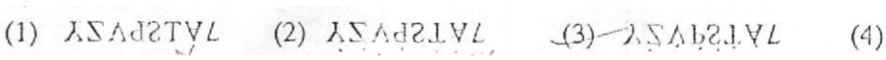


Q31. IDENTICAL



Q32. DL2CA34

Q33. YZVPSTA7



Q34. If A, B and C together earn Rs. 150 per day while A and C earn Rs. 94 per day. B anc C, daily, earn Rs. 76. Calculate the per day earning of C.
(1) 20 (2) 35 (3) 40 (4) 25

Q35. A train covers 36 km. in one hour. How many metres will it cover in 3 minutes?
(1) 2010 (2) 1800 (3) 1860 (4) 2000

Instruction for Q. No. 36 to 39: In the series of letters-numbers, what will come in the place of question mark(?)

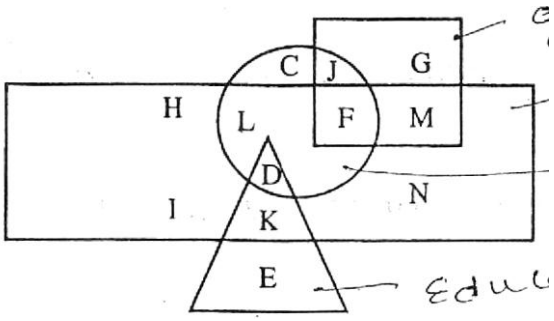
Q36. A25D, B22F, D18H, G13J, ?
(1) K7L (2) L7M (3) K10P (4) R16Y

Q37. 5X8, 7C11, 10U15, 14F20, ?
(1) 17L22 (2) 19R26 (3) 16S23 (4) 18T21

Q38. D15K, F12L, H9M, J6N, ?
(1) O2L (2) P3L (3) L3O (4) R3O

Q39. HL7, EO10, BR13, YU16, ?
(1) SX25 (2) ZX23 (3) WX21 (4) VX19

Instruction for Q. No. 40 to 43: In the figure given below, circle represents rural, rectangle represents male, triangle represents educated and square represents government employee. Study the figure and match the letters with the questions that follows.



Q40. Which letter represents neither a government employee nor an educated but is rural and not a male?
(1) C (2) N (3) G (4) M

Q41. Which letter indicates rural people and who are government employee but not male?
(1) F (2) H (3) E (4) J

Q42. Which letter represents the government employee but not a male nor rural and is uneducated?
(1) K (2) H (3) G (4) L

Q43. Which letter represents the uneducated people and also rural male?
(1) C (2) L (3) J (4) N

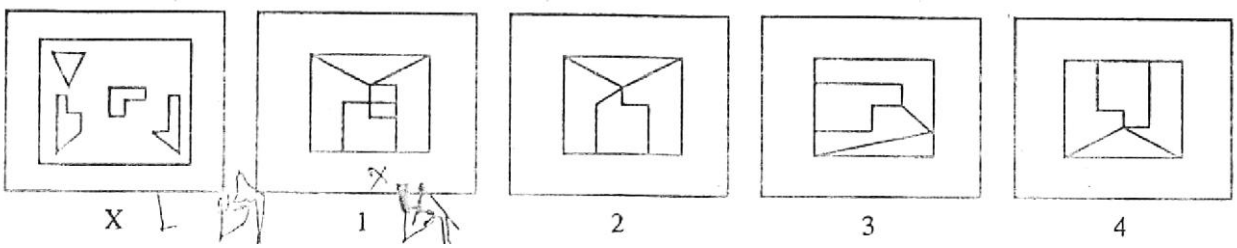
Q44. If the cost price of 5 eggs is equal to the selling price of 4 eggs, what is the percentage of profit?
(1) 35% (2) 30% (3) 25% (4) 40%

Q45. If 4 cows give 4 dabbas (containers) of milk in 4 days, then in how many days 8 cows will gave 8 dabbas (containers) of milk?
(1) 16 (2) 2 (3) 8 (4) 4

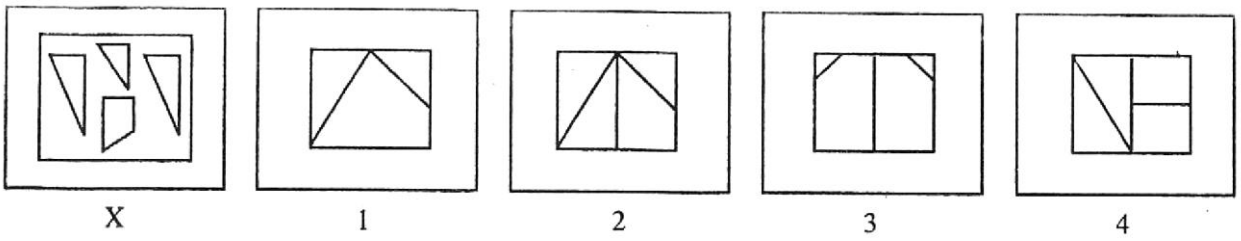
Q46. 7 numbers have an average of 13 and the average of other 13 numbers is 7. What would be the average of these 20 numbers?
(1) 9.1 (2) 3.9 (3) 6.8 (4) 8.9

Instruction for Q. No. 47 to 49: In each of the following questions, find out the figure from amongst the alternatives 1, 2, 3 & 4 which can be formed from the pieces given in X.

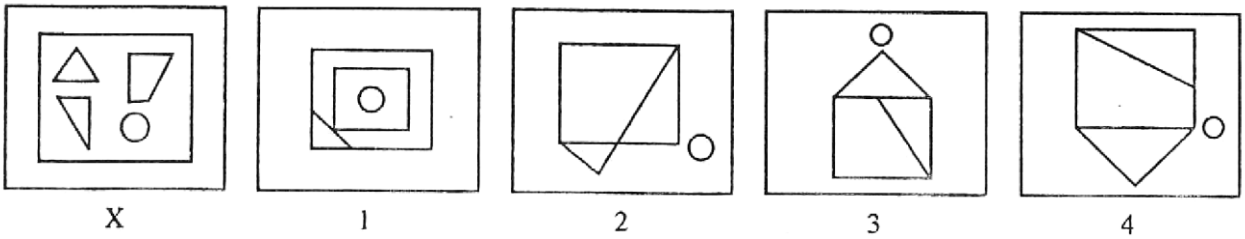
Q47.



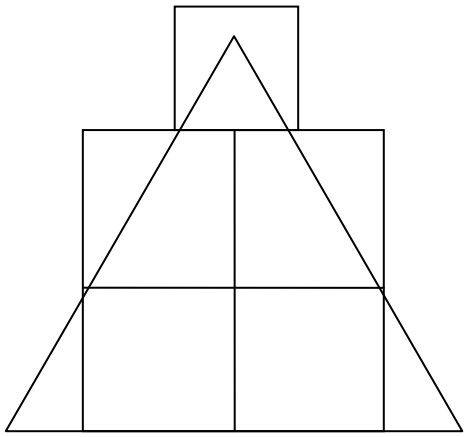
Q48.



Q49.



Q50. How many squares and triangles are there in the following figure?



(1) 7, 15 (2) 8, 17 (3) 9, 18 (4) 7, 18

PART – II
SCHOLASTIIC APTTUDE TEST
II (a) LANGUAGE COMPREHENSION TEST

Time : 45 minutes **Full Marks : 40**

DIRECTION

1. All the questions of this part are related to Language Comprehension.
2. This part contains 50 questions in Hindi Language and 40 questions in English Language. The candidate has to choose and attempt this test only in one Language i.e. either in Hindi or in English.

Language Sub	Full Marks	No. of questions	Marks allotted to each question	Page No.
Hindi	40	40	1(one)	15-17
or				
English	40	40	1(one)	15-17

3. Before answering the questions, read these directions very carefully.
4. Each question carries one mark.
5. Answer to all the questions is essential.
6. This questions are to be answered on the O.M.R. Answer Sheet supplied in the Examination Hall.
7. Every question has four alternatives, of which only one is correct.
8. Answer to each question is to be indicated by darkening the circle, by blue or black ball pen only, the number of the correct alternative in the O.M.R. Answer Sheet from amongst the ones given for the corresponding question in the Test (Question) Booklet.

Please Turn Over the Page and Start Your Work.

English:

Q(1 to 5) The passage given below is followed by a set of questions. Choose the most appropriate answer to each questions.

It was a chilly winter night. Saint Socrates was preaching to his disciples. His wife warned him of ending the discourse. Socrates did not oblige her. At midnight she got angry. She took a bucket of water and poured it on him. Socrates was just laughing. But his disciples were annoyed with the preceptress. Socrates told them, "I am a saint who is expected not to lose patience and temper even in precarious situations. My wife tested me and I got success. She is my preceptor. Don't relive her. " Having heard this, she fell on the feet of Socrates and begged of his pardon. Since then she became a good wife and a human women.

Q1. The night was
(1) warm (2) pleasant
(3) very cold (4) very warm

Q2. Socrates wife not angry because
(1) It was a chill winter night
(2) Socrates was preaching to his disciples
(3) She warned him to end the discourse
(4) Socrates continued preaching his disciples in the chilly winter night despite her warning

Q3. Socrates just laughed when his wife poured water on him because
(1) He took is as a test of his patience
(2) He himself wanted to take bath
(3) He enjoyed his wife's anger
(4) He was testing his wife

Q4. Socrates' wife felt sorry for her act because
(1) Socrates was shivering (2) Socrates was laughing
(3) Socrates lost his patience (4) Socrates kept his cool and even defended her.

Q5. How did this incident change Socrates' wife ?
(1) It made her wise (2) It made her good
(3) It instilled in her humility (4) Her nature became good and humane

Q(6 to 10) The passage given below is followed by a set of questions. Choose the most appropriate answer to each questions.

The doors of a great newspaper office are not ever locked. All through the day and all through the night work has to be done there, so that the readers of the paper may be kept in touch with everything which is interest. Hews comes into the office at every hour of the day – news of political developments, news of crimes, news of town happenings, and news of events which are going to take place. All this has to be gone through. The important facts are given headlines and the unnecessary details are cut out.

Everyday important things are taking place in all parts of the earth. Wherever anything interesting is going on, a representative of the paper is sent to take notes and get all the facts. If there is a serious train collision somewhere on the line, an army of lists of the dead and get an account of what took place from the eye witness. Camera men go with them and take pictures of the twisted and broken carriage.

Q6. 'Not ever locked' means
(1) always remains open (2) always remain locked
(3) sometimes locked (4) sometimes open

Q7. What is meant by 'headline'
(1) Lines on the forehead (2) Newspaper heading
(3) main line of railway (4) Major line

Q8. News comes into the office
(1) Round the clock (2) In the pre-fixed hours
(3) During day time (4) During night

Q9. 'An army of newspaper men' refers to
(1) Army man (2) Army man who reads newspaper
(3) A team of newspaper persons (4) Security man of the newspaper

Q10. What is done with the news that comes into the office?
(1) It is published as it is (2) Published with headlines and all details
(3) published with headlines and necessary details (4) Unnecessary details are cut out

Q(11-12) The following five sentences come from a paragraph. The first and the last sentences are given. Choose the order in which the three sentences (PQR) should appear to complete the paragraph.

Q11. S_1 I hold my temper and pick up my gum wrapper
S_2 ……
S_3 ……
S_4 ……
S_5 That dog dips up my garden and messes up my yard

P So why is yours always all over the place?
Q Then she says, and there's a law in this town about dogs on a leash.
R I put the wrapper in a bag
(1) PQR (2) RQP
(3) QPR (4) PRQ

Q12. S_1 Moving closer, I saw that it was a tiny baby squirrel
S_2 ……
S_3 ……
S_4 ……
S_5 It was now motionless, waiting for further assault

P It must have accidently fallen down from a nest
Q It was now an easy prey for crows
R It had already sustained two wounds due to the assault by a pair of crows
(1) PQR (2) RQP
(3) QPR (4) QRP

Q(13 - 22) Choose the word which best fills the blank in the sentences from the four options given.

Q13. One should not …….. the orders of one's superiors.
(1) defy (2) deify
(3) defile (4) devoid

Q14. Please convey my best … to your parents
(1) Complements (2) compliments
(3) supplements (4) nourishment

Q15. Please ……. Your votes in favour of me.
(1) caste (2) cast
(3) cost (4) cancel

Q16. He was wearing a …… cotton shirt.
(1) lose (2) cost
(3) loose (4) size

Q17. Her approach to work is so ……. That no one consider her reliable.
(1) casual (2) common
(3) low (4) high

Q18. The ……. Condition of our country is not so good.
(1) Economical (2) Economic
(3) Expensive (4) Cheap

Q19. There was a good …… of Tabla and violin in the cultural programme.
(1) Unison (2) Unity
(3) Union (4) Unanimous

Q20. Before we apply we must ensure that we …… the required qualifications for the job.
(1) contain (2) disclose
(3) possess (4) acquire

Q21. On the way home from work, my car ……. Out of gas.
(1) went (2) ran
(3) climbed (4) slid

Q22. One should ……. From making unwarranted comments.
(1) refrain (2) abstain
(3) allow (4) prevent

Q(23- 25) Select the meaning of the given phrases/ isiomes.

Q23. Body and soul
(1) Spiritually (2) Physically
(3) Entirely (4) Partially

Q24. Milk and water
(1) very costly (2) weak
(3) strong (4) white

Q25. To play ducks and drakes
(1) to waste money (2) to be romantic
(3) to behave like a child (4) very wise

Q(26 - 30) In the following passage there are some blanks with numbers. Fill in the blanks by selecting the most appropriate word for each blank from given options of each number.

It was a cloudy day. Before I 26 off to office, my mother 27 on my 28 an umbrella. So I 29 an umbrella along with my briefcase. Hardly had I started, when it started 30.

Q26. (1) went (2) reached
(3) begin (4) set

Q27. (1) asked (2) requested
(3) insisted (4) admonished

Q28. (1) get (2) taking
(3) have (4) leaving

Q29. (1) took (2) taken
(3) have (4) catch

Q30. (1) to drizzle (2) drizzling
(3) to rain (4) rained

Q (31- 33) Select the word which means the opposite of the given word.

Q31. Accustomed
(1) Used to (2) Habituated
(3) Unusual (4) Customary

Q32. Elevation
(1) Depression (2) Lift
(3) Scale up (4) Frequent

Q33. Humane
(1) Kind (2) Humanity
(3) Ruthless (4) Generous

Q(34 - 36) Select the word which means nearly the same of the given word.

Q34. Abstain
(1) Refuse (2) Accept
(3) Agree (4) Disagree

Q35. Brittle
(1) Strong (2) Fragile
(3) Unbreakable (4) Rough

Q36. Cajole
(1) Coax (2) Rebuke
(3) Chide (4) Upright

Q(37 - 40) In each of the following sentences you will find a blank. Fill in blanks from the given alternative.

Q37. He …… the opposition with a single trick.
(1) beat down
(2) beat up
(3) beat in
(4) beat about

Q38. The teacher was very upset when the students did not …….. for the class.
(1) show down
(2) show off
(3) showcase
(4) show up

Q39. Sachin …… an impossible win for India.
(1) brought up
(2) brought off
(3) brought before
(4) brought for

Q40. The rising cases of crime ……. Immediate measure
(1) call for
(2) call over
(3) call forth
(4) call in

PART – II
SCHOLASTIIC APTTUDE TEST
II (b) ABILITY TEST

Time : 45 minutes **Full Marks : 40**

DIRECTION

1. All the questions of this part are related to the subjects of Scholastic Ability Test.
2. Before answering the questions, read these directions very carefully.
3. This part contains 90 questions
4. Each question carries one mark.
5. Answer to all the questions is essential.
6. The subjects of Scholastic Aptitude Test are divided into three groups, as given below:

Sl. No.	Title of the group	Subjects covered under the group	Full marks	No. of questions	Marks allotted to each question
(i)	Science Discipline	Physics, Chemistry and Biology	35	35	1(one)
(ii)	Mathematics	Mathematics	20	20	1(one)
(iii)	Social Sciences and Humanities	History, Geography Civics and Economics	35	35	1(one)

7. **This questions are to be answered on the O.M.R. Answer Sheet supplied in the Examination Hall.**
8. Every question has four alternatives, of which only one is correct.
9. Answer to each question is to be indicated by darkening the circle, by blue or black ball pen only, the number of the correct alternative in the O.M.R. Answer Sheet from amongst the ones given for the corresponding question in the Test (Question) Booklet.

Please Turn Over the Page and Start Your Work.

Physics

Q1. What will be the work done in raising the velocity of a car weighing 2000 kg from 18 km/hr to 54 km/hr.

(1) 2.5×10^5 J
(2) 2.25×10^5 J
(3) 2.0×10^5 J
(4) 1.5×10^5 J

Q2. Two cars of unequal masses use similar tyres. If they are moving with same initial speed, the minimum stopping distance

(1) is smaller for the heavier car
(2) is smaller for the lighter car
(3) is same for both the cars
(4) depends on the volume of the car

Q3. A body is dropped from a 100 m high cliff and at the same time another body is thrown from the ground with 25 m/s velocity in upward direction. Where the two will meet?

(1) 50 m
(2) 40m
(3) 20m
(4) 10m

Q4. A truck and a car are moving with velocity v towards each other. They collide head in and stops after some time. If the time of collision is 1 se. which vehicle will have maximum change in momentum?

(1) car
(2) truck
(3) both will have same
(4) None of the above

Q5. A balloon which is ascending at the rate of 12m/s is 30.4 metre above the ground, when a stone is dropped. After what time the stone will reach the ground?

(1) 3 sec.
(2) 3.5 sec.
(3) 4 sec.
(4) 6 sec.

Q6. A pandubbi sends a sonar signal to locate a body and receives the echo after 5 s. If the velocity of sound is 340 m/s. What is the distance of the body?

(1) 0.85km
(2) 1.7km
(3) 0.425km
(4) 4.25km

Q7. Which of the following quantities remain constant in a planetary motion (consider elliptical orbits) as seen from the sun?

(1) Speed
(2) Angular velocity
(3) Kinetic energy
(4) Angular momentum

Q8. The far point of a myopic person is 100 cm in front of him. What is the power of the lens to correct the problem of his eye?

(1) −1.0 D
(2) +1.0 D
(3) −1.25 D
(4) +1.25 D

Q9. A vessel is 2 meter deep. How deep will it appear if it is filled with water and viewed from above?

(1) 2m
(2) 3m
(3) $\frac{3}{2}$m
(4) $\frac{4}{3}$m

Q10. A convex lens is made of a material ($\mu = 1.2$), both the surfaces are convex. If it is dipped in water ($\mu = 1.33$) it will behave like
(1) convergent lens (2) divergent lens
(3) a rectangular slab (4) a prism

Q11. A wire of resistance R is cut in three equal parts. If they are arranged in parallel and the equivalent resistance is R' then $\frac{R}{R'}$ will be equal to
(1) 3 (2) $\frac{1}{3}$
(3) 9 (4) $\frac{1}{9}$

Q12. Several electric bulbs designed for 220V supply line are rated 10W. How many lamps can be lighted if connected in parallel with each other across the 220V line if the maximum allowable current 5A.
(1) 220 (2) 110
(3) 440 (4) 55

Chemistry

Q13. Graphite is used as a lubricant in machines because it has a very high melting point and also it :
(1) is crystalline (2) has layer structure
(3) is a giant molecule (4) is a liquid at room temperature

Q14. Which of the following oxyacid of phosphorus are monobasic (monoprotic) ?
(1) H_3PO_4 (2) H_3PO_3
(3) H_3PO_2 (4) $H_4P_2O_7$

Q15. The percentage of gold present in 20 carat gold is
(1) 100 (2) 73.86
(3) 50 (4) 83.33

Q16. 8.7g of pure MnO_2 is heated with an excess of HCl and the gas evolved is passed into a solution of KI. Calculate the weight of the iodine librated (Mn = 55, Cl = 35.5, I = 127)
(1) 7.77g (2) 16.41g
(3) 12.70g (4) 25.4g

Q17. Which of the following aldehyde undergo cannizzaro reaction?
(1) C_3H_7CHO (2) C_6H_5CHO
(3) CH_3CHO (4) CH_3CH_2CHO

Q18. Which one of the following bases is not present in DNA?
(1) Cytosine (2) Thymine
(3) Quinoline (4) Adenine

Q19. Which one of the following is classified as a condensation polymer?
(1) Teflon (2) Acrylonitrile
(3) Dacron (4) Neoprene

Q20. Acidified $KMnO_4$ is decolourized by
(1) Ferric ammonium alum (2) Mortar salt
(3) Haematite (4) A netural ferric chloride solution

Q21. Which of the following evolve O_2 on treatment with water?
(1) F_2 (2) Cl_2
(3) Na (4) P_4

Q22. The number of iodine atoms present in 50ml of a 0.1M KI solution is
(1) 6×10^{23} (2) 12×10^{23}
(3) 3×10^{21} (4) 6×10^{22}

Q23. How many Faradays are required to reduce 1 mole of BrO_2 to Br^- ?
(1) 3 (2) 5
(3) 4 (4) 6

Biology

Q24. In simple organisms, exchange of gases and excretion occur through
(1) Osmosis (2) Diffusion
(3) Imbibition (4) All of the above

Q25. The site of photosynthesis in plant is
(1) Mitochondria (2) Chloroplast
(3) Leucoplast (4) Dictyosomes

Q26. Oxygen released during photosynthesis comes from
(1) Water (2) Carbon dioxide
(3) Glucose (4) Dictyosomes

Q27. The important components of DNA molecule are A (Adenine), T (Thymine), G (Guanine) and C (Cytosine). According to Chargaff's rule, their amount in DNA molecule is
(1) The amount of A & T is equal to that of C & G
(2) The amount of A & G is equal to that of T & C
(3) A, T, C & G are all in equal amount
(4) None of these

Q28. Organic farming is the technique of raising crops through the use of
(1) Manure (2) Biofertilizers
(3) Resistant varieties (4) All of these

Q29. WBC and RBC are found in human blood in the ratio of
(1) 1 : 60 (2) 1 : 600
(3) 1 : 6000 (4) 1 : 60,000

Q30. Serum differs from plasma in the absence of
(1) Fibrinogen (2) Immunoglobin
(3) Nutrients (4) Waste products

Q31. Which of the following diseases is not caused by polluted water
(1) Typhoid (2) Dysentery
(3) Malaria (4) Jaundice

Q32. Muscular partition present between thorax and abdomen is
(1) Pericardium (2) Pleura

(3) Epiglottis (4) Diaphragm

Q33. Cement factory labourers are prone to
(1) Leukemia (2) bone-marrow diseases
(3) Asbestosis (4) Cytosilicosis

Q34. The excretory organs in "Earthworm" is known as
(1) Malphigian cells (2) Renal cells
(3) Nepridia (4) Flame cells

Q35. The most important function of inflorescence is to help in
(1) Dispersal of seeds (2) Help in fertilization
(3) Attracting insects for pollination (4) Forming large number of fruits

Mathematics

Q36. If $\frac{1}{p+q}, \frac{1}{q+r}, \frac{1}{r+p}$ are in A.P. then
(1) p, q, r are in A.P. (2) q^2, p^2, r^2 are in A.P.
(3) p^2, q^2, r^2 are in A.P. (4) q, p, r are in A.P.

Q37. For the equation $3x^2 + px + 3 = 0$, if one of the roots is the square of the other then p = ……
(1) $-\frac{1}{3}$ (2) – 1
(3) – 6 (4) $\frac{2}{3}$

Q38. The area of a rectangle is same as that of a circle of radius $\sqrt{\frac{35}{11}}$ cm. If the length of the rectangle exceeds its breadth by 3cm., then the length of the rectangle is
(1) 2 cm (2) 3 cm
(3) 4 cm (4) 5 cm

Q39. If x + y = 1 then $x^3 + y^3 + 3xy$ = …….
(1) 0 (2) 1
(3) 2 (4) None of these

Q40. The difference between a two digit given number and the number obtained by interchanging the digits is 27. The sum of the two digits is …….
(1) 3 (2) 5
(3) 7 (4) cannot be found

Q41. The probability that a leap year selected will have 53 Sunday is
(1) $\frac{1}{7}$ (2) $\frac{2}{7}$
(3) $\frac{3}{7}$ (4) 0

Q42. The probability 'p' of happening of an event
(1) can be negative (2) $0 \le p \le 1$
(3) can be greater than 1 (4) none of these

Q43. If $\text{Sin}A = \frac{1}{2}\left(0^0 < A < 90^0\right)$ then $\text{Cos}^3A - 3\text{Cos}A$ = ……

(1) 0 (2) 1

(3) $\frac{\sqrt{3}}{2}$ (4) $\frac{1}{2}$

Q44. If $\text{Sin}\theta_1 + \text{Sin}\theta_2 + \text{Sin}\theta_3 = 3$ then $\text{Cos}\theta_1 + \text{Cos}\theta_2 + \text{Cos}\theta_3$ = ……

(1) 3 (2) 2

(3) 1 (4) 0

Q45. If $\text{Sin}\theta + \text{Cosec}\,\theta = 2$ then $\text{Sin}^{100}\theta + \text{Cosec}^{100}\,\theta$ = ……

(1) 1 (2) 2

(3) 4 (4) none of these

Q46. If the vertices of a triangle are (1, 2), (4, -6) and (3, 5) then

(1) triangle is right angled (2) the area of triangle is 12.5 sq. units

(3) the points do not form a triangle (4) none of these

Q47. In ΔABC, E divides AB in the ratio 3 : 1 and F divides BC in the ratio 3 : 2, then the ratio of areas of ΔBEF and ΔABC is

(1) 3 : 5 (2) 3 : 10

(3) 1 : 5 (4) 3 : 20

Q48. The sum of the areas of two circles which touch each other externally is 153π sq. units. If the sum of their radii is 15 units, then the ratio of large radius to the smaller radius is equal to

(1) 4 (2) 2

(3) 3 (4) none of these

Q49. ABCD is a rectangle such that AC + AB = 5 AD and AC – AD = 8, then the area of rectangle ABCD is

(1) 36 sq. units (2) 50 sq. units

(3) 60 sq. units (4) cannot be found

Q50. Water flows at the rate of 10 metres per minute from a cylindrical pipe 5 mm. in diameter. The time taken to fill up a conical vessel, whose diameter at the base is 40 cm and depth 24 cm., is

(1) 55 minutes (2) 52 minutes 1 sec.

(3) 51 minutes 12 secs. (4) 48 minutes 15 secs.

Q51. If the arithmetic mean of 9 observations is 100 and that of 6 observations is 80, then the combined mean of all the 15 observations will be

(1) 100 (2) 80

(3) 90 (4) 92

Q52. On 13 consecutive days the number of person booked for violating speed limit of 40 km/hr. were as follows

59, 52, 58, 61, 68, 57, 62, 50, 55, 62, 53, 54, 51

The median number of speed violations per day is

(1) 61 (2) 52

(3) 55 (4) 57

Q53. Which of the following is correct for the given data -1, 0, 1, 2, 3, 5, 5, 6, 8, 10, 11, ?

(1) mean = mode = median (2) mean = 5

(3) mean = mode (4) mode = modian

Q54. In a given fraction if the numerator is multiplied by 3 and the denominator is subtracted by 3, the fraction becomes $\frac{18}{11}$ and if the numerator is increased by 8 and the denominator doubled the fraction becomes $\frac{2}{5}$. The sum of the numerator and the denominator of the given fraction is

(1) 27 (2) 33
(3) 37 (4) 42

Q55. Two fair dice are thrown together. The probability that the number 5 does not appear on any of them is

(1) $\frac{1}{36}$ (2) $\frac{5}{36}$
(3) $\frac{11}{36}$ (4) $\frac{25}{36}$

History

Q56. Lenin introduced New Economic Policy in the year:
(1) 1917 (2) 1919
(3) 1921 (4) 1924

Q57. Aryabhatiya was written during:
(1) Maurya period (2) Shung period
(3) Khushan period (4) Gupta period

Q58. Who wrote Brihat Samhita
(1) Vatsyayana (2) Varah Mihir
(3) Kalidas (4) Kalhan

Q59. The First summit of non-aligned countries was held at:
(1) Cairo (2) Belgrade
(3) New Delhi (4) Djakarta

Q60. Television service was started in New Delhi on
(1) 14 September 1959 (2) 15 September 1959
(3) 16 September 1959 (4) 17 September 1959

Q61. The Reserve Bank of India was set up in
(1) 1932 (2) 1933
(3) 1934 (4) 1936

Q62. Which were the three Presidency Towns in British India?
(1) Calcutta, Delhi, Bombay (2) Delhi, Bombay, Madras
(3) Calcutta, Delhi, Madras (4) Calcutta, Bombay, Maadras

Q63. Under whose leadership was the Hindustan Socialist Republican Association organized in 1928?
(1) Bhagat Singh (2) Chandra Shekhar Azad
(3) Rajguru (4) Batukeshwar Dutt

Q64. What is Tolkappiyam?
(1) River (2) King
(3) Sangam Text (4) Sanskriti Test

Q65. Shilappadigaram was written in which language?
(1) Malyalam (2) Tamil

(3) Telgu (4) Sanskrit

Geography

Q66. What is the longitudinal extent of India?
(1) 67°10' East to 96°27' East (2) 67°05' East to 96°22' East
(3) 69°05' East to 98°22' East (4) 68°08' East to 97°25' East

Q67. Read the following statements and select the correct option which follow-
(a) Evergreen forest is found in Kerala
(b) Tropical deciduous forest is found in Odisha
(c) Dry deciduous forest is found Western Madhya Pradesh
(1) Only (a) is correct (2) Only (b) is correct
(3) Only (c) is correct (4) (a), (b) and (c) are correct

Q68. Assertion (A): Bikaner has high diurnal range of temperature.
Reason (R): Bikaner is located far away from the sea.
Select the correct option from the given alternatives -
(1) Both (A) and (R) are true and (R) explains (A)
(2) Both (A) and (R) are true but (R) does not explains (A)
(3) (A) is true but (R) is false
(4) (A) is false but (R) is true

Q69. Assertion (A): People of J & K are covered in woolen clothes in winter season while people in Kerala are in lungi.
Reason (R): Both the states are situated in the same longitudes of meridian.
Select the correct option from the given alternatives -
(1) Both (A) and (R) are true but (R) explains (A)
(2) Both (A) and (R) are true but (R) does not explains (A)
(3) (A) is true but (R) is false
(4) (A) is false but (R) is true

Q70. Which of the following soils is more fertile?
(1) Bangar (2) Khadar
(3) Laterite (4) Red Soil

Q71. The Ganges of the South is
(1) Kaveri (2) Godavari
(3) Narmada (4) Krishna

Q72. The origin of Himalaya was in which era?
(1) Tertiary (2) Miocene
(3) Paleozoic (4) Pleistocene

Q73. Sardar Sarovar dam is constructed on
(1) Tapti (2) Narmada
(3) Mahi (4) Luni

Q74. The first rail line in India was laid between -
(1) Mumbai - Pune (2) Mumbai - Thane
(3) Mumbai - Ahmedabad (4) None of these

Q75. According to 2011 census the highest density of population is in -
(1) U P (2) Kerala

(3) Bihar (4) West Bengal

Q76. Who made the Indian Constitution?
(1) Constituent assembly (2) British Parliament
(3) Indian Parliament (4) Governor general

Q77. When was the first election for the Loksabha in India held?
(1) 1947 (2) 1948
(3) 1949 (4) 1952

Q78. Which authority has the power to suspend fundamental rights in India/
(1) Supreme Court (2) Parliament
(3) Prime Minister (4) President

Q79. Who is the appointing authority for the Chairman of Union Public Service Commission?
(1) Parliament (2) Prime Minister
(3) President (4) Cabinet

Q80. Indian President submits his resignation letter to whom?
(1) Vice President (2) Chief Minister
(3) Prime Minister (4) Lok Sabha speaker

Q81. Who was the chairman of the Drafting committee of the Indian Constitution?
(1) Dr. Rajendra Prasad (2) Dr. Bhim Rao Ambedkar
(3) Jawahar Lal Nehru (4) Raj Gopalachari

Q82. Democracy is a system of government in which the final power rests with
(1) The mob (2) The People
(3) The Politicians (4) The civil servants

Q83. The fundamental duties of Indian Citizens are contained in
(1) Part I of the Constitution (2) Part III of the Constitution
(3) Part IV A of the constitution (4) None of the above

Q84. Who give recognition to Political Party in India?
(1) President (2) Central Home Minister
(3) Election Commission (4) Loksabha Speaker

Q85. Who was the authority to change the name of any state?
(1) President (2) Parliament
(3) Rajya Sabha (4) Regional Council

Economics

Q86. The First Human Development Report for the World was prepared by:
(1) India (2) USA
(3) UNDP (4) England

Q87. "The National Consumer Day" is celebrated on"
(1) 13 August (2) 26 January
(3) 2 October (4) 24 December

Q88. The Co- operative Credit Societies ACT in India was passed in the year:
(1) 1904 (2) 1947
(3) 1951 (4) 1991

Q89. World Trade Organization (WTO) was established in the year:
(1) 1945 (2) 1991
(3) 1995 (4) 2001

Q90. Eleventh Five Year Plan of India's period is:
(1) 1985 – 1990 (2) 2002 - 2007
(3) 2007 - 2012 (4) 2012 - 2017

NTSE – Stage – 1 (2014)
Hints and Solution

Mental Ability Test (MAT)

Sol. 1 (4)

Sol. 2 (3)

Sol. 3 (3)

Sol. 4 (1)

Sol. 5 (2)

Sol. 6 (1)

Sol. 7 (3)

Sol. 8 (3)

Sol. 9 (1)

Sol. 10 Question in Wrong

Sol. 11 (3)

Sol. 12 (1)

Sol. 13 (3)

Sol. 14 (3)

Sol. 15 (4)

Sol. 16 (2)

Sol. 17 (3)

Sol. 18 (1)

Sol. 19 (2)

Sol. 20 (2)

Sol. 21 (2)

Sol. 22 (3)

Sol. 23 (2)

Sol. 24 (3)

Sol. 25 (1)

Sol. 26 (2)

Sol. 27 (1)

Sol. 28 (2)

Sol. 29 (1)

Sol. 30 (2)

Sol. 31 (3)

Sol. 32 (1)

Sol. 33 (3)

Sol. 34 (1)

Sol. 35 (4)

Sol. 36 (1)

Sol. 37 (2)
Sol. 38 (3)
Sol. 39 (4)
Sol. 40 (1)
Sol. 41 (4)
Sol. 42 (3)
Sol. 43 (2)
Sol. 44 (2)
Sol. 45 (4)
Sol. 46 (1)
Sol. 47 (4)
Sol. 48 (2)
Sol. 49 (4)
Sol. 50 (1)

Language Test

English

Sol. 1 (3)
Sol. 2 (4)
Sol. 3 (1)
Sol. 4 (4)
Sol. 5 (4)
Sol. 6 (1)
Sol. 7 (2)
Sol. 8 (1)
Sol. 9 (3)
Sol. 10 (4)
Sol. 11 (1)
Sol. 12 (1)
Sol. 13 (1)
Sol. 14 (2)
Sol. 15 (2)
Sol. 16 (3)
Sol. 17 (1)
Sol. 18 (2)
Sol. 19 (1)
Sol. 20 (3)
Sol. 21 (2)
Sol. 22 (1)

Sol. 23 **(3)**

Sol. 24 **(2)**

Sol. 25 **(3)**

Sol. 26 **(4)**

Sol. 27 **(3)**

Sol. 28 **(2)**

Sol. 29 **(1)**

Sol. 30 **(1)**

Sol. 31 **(3)**

Sol. 32 **(1)**

Sol. 33 **(3)**

Sol. 34 **(1)**

Sol. 35 **(2)**

Sol. 36 **(1)**

Sol. 37 **(1)**

Sol. 38 **(4)**

Sol. 39 **(1)**

Sol. 40 **(1)**

Scholastic Aptitude Test (SAT)

Physics

Sol. 1 **(3)**

$W = \Delta KE$

$= \frac{1}{2}mv_f^2 - \frac{1}{2}mv_i^2$

$= \frac{1}{2} \times 2000\left[15^2 - 5^2\right]$

$= 2 \times 10^5 J$

$v_i = \frac{18 \times 5}{18} = 5 m/s$

$v_f = \frac{54 \times 5}{18} = 15 m/s$

Sol. 2 **(3)**

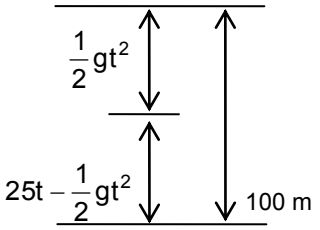
(-)ve acceleration for both the cars is equal since μ is same.

Sol. 3 **(3)**

$\frac{1}{2}gt^2 + \left\{25t - \frac{1}{2}gt^2\right\} = 100$

$t = 4s$

Distance from ground $25 \times 4 - \frac{1}{2}(10)(4)^2 = 20m$



Sol. 4 **(2)**

Sol. 5 **(3)**

$-\ 30.4 = 12t - \frac{1}{2}(9.8)t^2$

$4.9t^2 - 12t - 30.4 = 0$

$t = 4\ s$

Sol. 6 (1)

$d = \frac{vt}{2} = \frac{340 \times 5}{2} = 850m = 0.85\ km.$

Sol. 7 (4)

Angular momentum

Sol. 8 (1)

Lens should form a virtual image of a distant object at 100 cm from the lens. Thus it should be a divergent lens and its focal length = - 100 cm

$f = -100\ cm = -1\ m$

$\therefore P = \frac{1}{f} = \frac{1}{-1} = -1\ D$

Sol. 9 (3)

Apparent depth = $\frac{D}{\mu} = \frac{2}{1.33} = \frac{1}{4/3} = \frac{3}{2}m$

Sol. 10 (2)

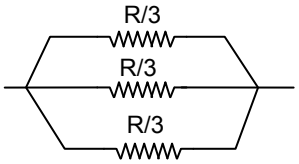
Ref. Index of medium is greater than ref. index of material of lens.

Sol. 11 (3)

$\frac{1}{R'} = \frac{1}{R/3} + \frac{1}{R/3} + \frac{1}{R/3}$

$= \frac{3}{R} + \frac{3}{R} + \frac{3}{R} = \frac{9}{R} \Rightarrow \frac{R}{R'} = 9$

$I_{max} = ni = n\left(\frac{P}{V}\right)$



Sol. 12 (2)

$\therefore n = \frac{VI_{max}}{P} = 110$

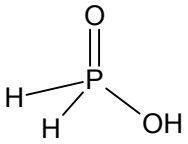
Chemistry

Sol. 13 (2)

Graphite is used as a lubricant due to layer structure.

Sol. 14 (3)

H_3PO_2 is a monobasic acid due to it has only one replaceable hydrogen.



Sol. 15 (4)

Atomic mass of gold (Au) = 197 g (100%)

24 carat gold ——197 g (100%)

20 carat gold ——?

$\therefore$ mass of gold (Au) $= \frac{20 \times 197}{24} = 164.16g$

% of gold present in 20 carat gold $= \frac{164.16}{197} \times 100 = 83.33\%$

Sol. 16 (4)

$MnO_2 + 4HCl \longrightarrow Cl_2 + MnCl_2 + 2H_2O$

87g ——————— 71g

8.7g ——————— ? mass of Cl_2 produced $= 7.1g$

$Cl_2 + 2KI \longrightarrow I_2 + 2KCl$

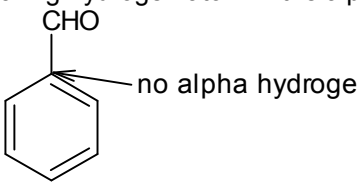
71g ——————— 254g

7.1g ——————— ?

$\therefore$ mass of I_2 liberate $= 25.4g$

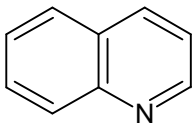
Sol. 17 (2)

Aldehydes lacking hydrogen atom in the alpha position involve in "cannizzaro reaction".

$C_6H_5CHO =$ 

Sol. 18 (3)

Quinoline base is not present in DNA



Sol. 19 (3)

Dacron (Terylene) is an example "Condensation of Polymes"

Sol. 20 (2)

It's Mohr's Salt

$(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$

$MnO_4^- + Fe^{+2} \xrightarrow{H^+} Mn^{+2} + Fe^{+3}$

Ammoniumiron(II)sulphate decolorizes $KMnO_4$

Sol. 21 (1)

$2F_2 + 2H_2O \longrightarrow 4HF + O_2 \uparrow$

$Cl_2 + H_2O \longrightarrow HCl + HOCl$

$Na + H_2O \longrightarrow NaOH + \frac{1}{2}H_2 \uparrow$

P_4 doesn't react with H_2O

Sol. 22 (3)

$$\text{Molarity (M)} = \frac{n}{V(mL)} \times 1000$$

$$0.1 = \frac{n}{50} \times 1000$$

$\therefore$ no. of moles of $KI = 5 \times 10^{-3}$

$\therefore$ No. of Iodine atoms $=$ No. of moles $\times 6.023 \times 10^{23}$

$= 5 \times 10^{-3} \times 6.023 \times 10^{23}$

$= 3.011 \times 10^{21}$

Sol. 23 (2)

1 mole of electrons $= 1$ Farady

$\therefore$ $5e + BrO_2 \longrightarrow Br^-$

$\therefore$ 5 Faradys are required.

Biology

Sol. 24 **(2)**

Sol. 25 **(2)**

Sol. 26 **(1)**

Sol. 27 **(2)**

Sol. 28 **(4)**

Sol. 29 **(2)**

Sol. 30 **(1)**

Sol. 31 **(3)**

Sol. 32 **(4)**

Sol. 33 **(4)**

Sol. 34 **(3)**

Sol. 35 **(3)**

Mathematics

Sol. 36 **(2)**

$$\frac{1}{q+r}-\frac{1}{p+q}=\frac{1}{r+p}-\frac{1}{q+r}$$

$P^2 - r^2 = q^2 - p^2 \Rightarrow 2p^2 = r^2 + q^2$

$\therefore$ q^2, p^2, r^2 are in AP

Sol. 37 **(3)**

$\alpha + \alpha^2 = \frac{-p}{3}$

$\alpha^3 = 1 \Rightarrow (\alpha+1)(\alpha^2 + \alpha + 1) = 0$

$$(\alpha + 1)\left(\frac{-p}{3}+1\right)=0$$

$\alpha = +1$, $p = 3$

$P = -6$

Sol. 38 **(4)**

$$lb=\frac{22}{7}x\frac{35}{11}=10 \qquad \text{(i)}$$

And a/c $l = b + 3$ (ii)

Solving (i) & (ii), $l = 5$, $b = 2$

Sol. 39 **(2)**

$X + y = 1$ & $x^3 + y^3 + 3xy = (x + y)^3 - 3xy(x + y) + 3xy = 1$

Sol. 40 **(4)**

$(10a + b) - (10b + a) = 27$

Or $9(a - b) = 27$

Or $a - b = 3$

Sol. 41 **(2)**

In a leap year number of days

= 366 = 52 complete weeks + 2days

Remaining two days are Sunday, Monday

Monday, Tuesday

Saturday, Sunday

For ourable event = 2

Total events = 7

Prob = $\frac{2}{7}$

Sol. 42 (2)

It is obvious

Sol. 43 ()

No correct option is given

Sol. 44 (4)

$\sin\theta_1 + \sin\theta_2 + \sin\theta_3 = 3$

$\sin\theta_1 = \sin\theta_2 = \sin\theta_3 = 1$

$\therefore \theta_1 = \theta_2 = \theta_3 = \frac{\pi}{2}$

$\therefore \cos\theta_1 + \cos\theta_2 + \cos\theta_3 = 0$

Sol. 45 (2)

$\sin\theta + \text{cosec}\theta = 2$

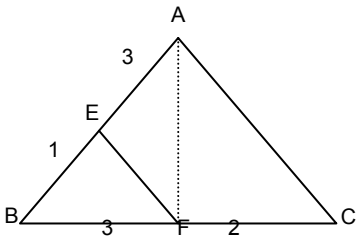
$\theta = \frac{\pi}{2}$

Sol. 46 (2)

$$\text{Area} = \frac{1}{2}\left|1(-6-5)+4(5-2)+3(2+6)\right|$$

$$= \frac{1}{2}\left|-11+12+24\right| = \frac{25}{2} = 12.5 \text{ sq units}$$

Sol. 47 (4)



Let Area of $\Delta BEF = x$

$\therefore$ Area of $\Delta AFE = 3x$

Let Area of $\Delta ABF = 3y$

$\therefore$ Area of $\Delta CAF = 2y$

Area ΔABC = Area ΔBEF + Area ΔAEF

$3y = x + 3x$ (i)

$3y = 4x$

$$\frac{3}{4} = \frac{x}{y}$$

$$\frac{\text{Area}\,\Delta BEF}{\text{Area}\,\Delta ABC} = \frac{x}{y} = \frac{1}{5}x\frac{3}{4} = \frac{3}{20}$$

Sol.48 (1)

Let r_1 = radius of big circle & r_2 = radius of small circle

$\pi\left(r_1^2 + r_2^2\right) = 153\pi$

$\therefore r_1^2 + r_2^2 = 153$ (i)

And $r_1 + r_2 = 15$ (ii)

Solving (i) & (ii)

$R_1 = 12$, $r_2 = 3$

$$\frac{r_1}{r_2} = \frac{12}{3} = 4$$

Sol. 49 (3)

L = length & b = breadth

$\therefore \sqrt{l^2 + b^2} + l = 5b$ (i)

$\sqrt{l^1 + b^2} - b = 8$

$L^2 = 64 + 16b$ (ii)

Solving (i) & (ii) we get

$L^2 + 4l - 96 = 0$

$\therefore l = 12, b = 5$

Arcat = lb = 60 sq units

Sol. 50 (3)

Sol. 51 (4)

Combined mean = $\frac{9x100+6x80}{15}=92$

Sol. 52 (4)

13 observations are in ascending order

15, 51, 52, 53, 54, 55, 57, 58, 59, 61, 62, 62, 68 median = 57

Sol. 53 (4)

Mode = 5

Median = 5

Sol. 54 (3)

Given $\frac{3a}{b3}=\frac{18}{11}\text{and}\frac{a+8}{2b}=\frac{2}{5}$

$\Rightarrow a=2\text{and}b=25$

Sol. 55 (4)

5 does not appear

Favorable events = 5 x 5 = 25

Total events = 6 x 6 = 36

History

Sol. 56 (3)

Sol. 57 (4)

Sol. 58 (2)

Sol. 59 (2)

Sol. 60 (2)

Sol. 61 (3)

Sol. 62 (4)

Sol. 63 (2)

Sol. 64 (3)

Sol. 65 (2)

Geography

Sol. 66 (4)

Sol. 67 (4)

Sol. 68 (2)

Sol. 69 (2)

Sol. 70 (1)

Sol. 71 (2)

Sol. 72 (2)

Sol. 73 **(2)**

Sol. 74 **(2)**

Sol. 75 **(1)**

Civics

Sol. 76 **(1)**

Sol. 77 **(4)**

Sol. 78 **(4)**

Sol. 79 **(3)**

Sol. 80 **(1)**

Sol. 81 **(2)**

Sol. 82 **(2)**

Sol. 83 **(3)**

Sol. 84 **(3)**

Sol. 85 **(2)**

Economics

Sol. 86 **(3)**

Sol. 87 **(4)**

Sol. 88 **(1)**

Sol. 89 **(3)**

Sol. 90 **(3)**