Class X Code	State Code	Year	Centre Code	Serial No.
2	1 4	1 4		

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING;
MEGHALAYA: SHILLONG

NATIONAL TALENT SEARCH (STATE LEVEL) EXAMINATION 2014-15.

Part I (a) Mental Ability Test   *- 45 minutes*   *Maximum Marks -50*
     (b) Language Comprehensive Test   *-45 minutes*   *Maximum Marks -40*
Part II   Scholastic Aptitude Test   *-90 minutes*   *Maximum Marks-90*

INSTRUCTIONS TO CANDIDATES
Read the following instructions carefully before answering the questions. Answers are to be written in the supply ANSWER SHEET.

1. Please write your Centre Code no. and Serial No. very clearly (only one digit in one block) as given in your Admit Card.
2. Please note that no block is left unfilled and even zeroes appearing in the Centre Code no. and Serial no. Each digit are to be correctly transferred to the appropriate block on both **QUESTION BOOKLET** and the **ANSWER SHEET**. For all subsequent purposes your Centre Code no. and Serial no. shall remain the same even when you are allowed a change of centre.
3. Avoid over writing the numbers/ digits for both Centre Code and Serial No.
4. The Question Booklet and Answer Sheet are consisting of Two Parts. Each Part consists 90 questions.
5. All Questions carry one mark each.
6. All Questions are Compulsory.
7. Begin with the first question and keep trying one question after another till you finish both the parts.
8. Since the time allotted to the two parts of these question booklets is very limited, you should make the best of it by not spending time on any one question.

9. Separate pages for Rough Work are provided at the last page of your question booklet.

10. The answer sheet has two parts. Part I and Part II corresponding to Part I and Part II of the Question Booklet. In part II, answers to a subject are to be given under the column where the name of the subject is given.

11. Answer to each question is to be indicated by encircling around alternative 1 or 2 or 3 or 4 or 5 **OR** a or b or c or d or e from amongst the ones given for the corresponding questions in the question Booklet, e.g.., if you think that alternative 1 is correct then encircle as example given below.

①

12. Now turn to the next page and start answering the questions.

N.B. Do not write anything except Serial No. and rough work anywhere in this Booklet

MENTAL ABILITY TEST

Direction (Question 1 to 5): Given below are based on letter series in which some letters are missing. The missing letters are given in a proper sequence as one of the alternatives among the four alternates under each question. Choose the correct alternates.

1. a – baa – baa – ba

   a. aba   b. bab

   c. caa   d. bbb

2. – ab – ab – a – pab

   a. aapp   b. apap

   c. pppb   d. bbaa

3. – stt – tt – tts –

   a. tsts   b. ttst

   c. sstt   d. tsst

4. – nmmn – mmnn – mnnm –

   a. nmmn   b. mnnm

   c. nnmm   d. nmnm

5. b – b – bb – – bbb – bb – b

   a. bbbbba   b. bbaaab

   c. ababab   d. aabaab

Direction (Question 6 to 15): In each of the following Questions, four of the following five are alike in a certain way and so form a group. Which is the one that does not belong to that group?

6
   a. Pen   b.   Calculator
   c. Pencil   d.   Ink
   e. Eraser

7
   a. Carrot   b. Radish
   c. Potato   d. Sweet Potatoes
   e. Beet

8
   a. Mercury   b. Moon
   c. Jupiter   d. Venus
   e. Pluto

9
   a. Silver   b. Iron
   c. Gold   d. Zinc
   e. Tin

10
   a. Ring   b. Ornaments
   c. Necklace   d. Bangle
   e. Bracelet

11
   a. Faster   b. Bigger
   c. Greater   d. Larger
   e. Taller

12
   a. Himachal Pradesh   b. Haryana
   c. Jammu & Kashmir   d. Punjab
   e. Chandigarh

13
   a. April   b. May
   c. July   d. September

14	a. Mist	b. Cloud
	c. Rain	d. Vapour
	e. Fog	

15	a. Cave	b. Slanty
	c. Hut	d. Nest
	e. Palace	

Direction (Question 16 to 20): In each of the Questions below, a related pair of words in Capital letter is followed by four parts of words as alternate. Choose a pair in vehicles the words bear the same relationships to each other as the words of the given pair bear.

16. BIRDS: WINGS:? : ?

   a. Whale: Water   b. Dog: Lungs
   c. Car: Wheel   d. Pen: Paper

17. DARKNESS: LAMP:? : ?

   a. Fatigue : Exercise   b. Thirst: Water
   c. Medicine ; Illness   d. Study: Classroom

18. CIRCLE : DIAMETER: ?: ?

   a. Rectangle : Diagonal   b. Diameter: Radius
   c. Square : Rectangle   d. Bisector : Angle

19. SHOE : LEATHER : ? : ?

   a. Medicine : Doctor   b. Highway : Asphalt
   c. Train : Wagon   d. Bus: Conductor

20. POOR : MONEY : ? : ?

   a. Weak: Bold   b. Bold: Dark
   c. Strong : Body   d. Weak: Strength

Direction (Question 21 to 25): In the following Questions you are to select the correct answer based on the statement in the given questions.

21. If MACHINE is coded as 19-7-9-14-15-20-11, how will you code DANGER?

    a. 11-7-20-16-11-24   b. 13-7-20-9-11-25

    c. 10-7-20-13-11-24   d. 11-7-20-10-11-25

22. If A = 26, B=25 and so on. SUN=27, then how will you code CAT?

    a. 24   b. 27

    c. 57   d. 58

23. If REASON is coded as 5 and BELIEVED as 7, then what is the code for GOVERNMENT?

    a. 6   b. 8

    c. 9   d. 10

24. In a certain code, 15789 is written as EGKPT and 2436 is written as ALUR, how is 24539 written in that code?

    a. ALGUT   b. ALEUT

    c. ALGTU   d. ALGRT

25. If 453945 stands for DECIDE, then how 8978 is written.

    a. BHEF   b. CDEH

    c. GHEF   d. HIGH

Direction (Question 26 to 30): In the following Questions find the missing character in the figure.
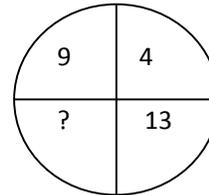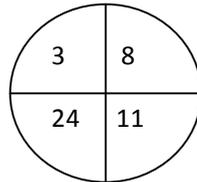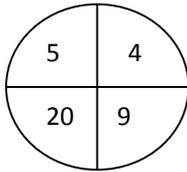
26. Find the missing character.
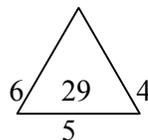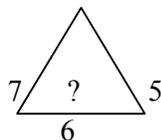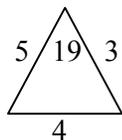
    a. 25   b. 27

    c. 41   d. 47

    e. 40

27. Find the missing number in the following matrix.

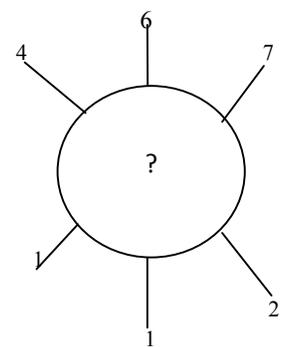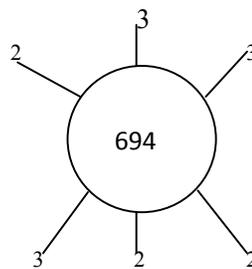| 1	2	3
11	7	5
120	45	?

a. 15   b. 16

c. 17   d. 18

e. 19

28. Find the missing number.

5	4
20	9

3	8
24	11

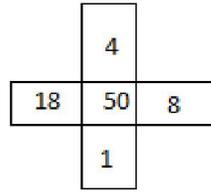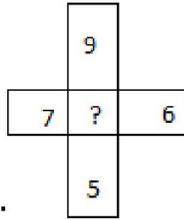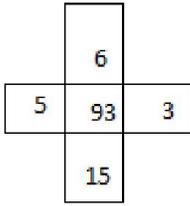| 9	4
?	13

a. 52   b. 36

c. 117   d. 81

e. 37

29. Find the missing character.
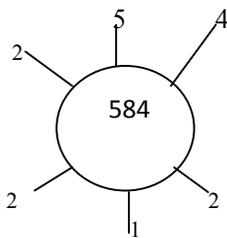
a. 937   b. 824

c. 769   d. 678

e. 786

30. Find the missing term in the second figure.

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    6            9            4
5  93  3     7  ?  6    18  50  8
   15           5            1
```

    a. 15   b. 19

    c. 27   d. 85

    e. 89

Direction (Question 31 to 35): To each of the following questions four probable answers have been given as alternatives. Select the best alternates as your answers.

31. Your School has organized a money camp for the education of poor children. you
    a. Persuade your friends to donate
    b. Donate your saving partly at the camp
    c. Do not believe in this kind of donation and decide not to attend
    d. Ask your parents to donate money

32. You are getting late for your school and no bus is available. In such situations
    a. You start walking
    b. You drop the idea of going to school that day and return home
    c. You think about other possible conveyance
    d. You wait patiently for the bus though you are late for the class.

33. You have a new teacher in your school. You
    a. Will be indifferent
    b. Welcome warmly
    c. Go out flatter him as he will help out in tutor
    d. Have problems adjusting as you are still like your old teacher.

34. If wrongly accused of something, you would
    a. Try to convince others, but without any hope of doing so.
    b. Try your best to convince others and hope that you succeed.
    c. Not even try, as it would be of no use
    d. Be able to convince others of your innocence easily.

35. You are anxiously waiting for someone at home, you

    a. Don't give it a thought

    b. Are just busy at your work

    c. Run out the minute you hear a car stop

    d. Call up many times to find out why he/she is taking so long.

Direction (Question 36 to 40): In each question, are based on the following figures:

36. How many 5s are there in the following sequence which are immediately followed by 3 but not immediately preceded by 7?

             8 9 5 3 2 3 3 8 5 5 6 8 7 3 3 5 7 7 5 3 3 5 7 3 8.

    a. One   b. Two
    c. Three   d. Four

37. How many 7s are there in the following number series which are preceded by 9 and also followed by 6?

             7 8 9 7 6 5 3 4 2 8 9 7 2 4 5 9 2 9 7 6 4 7.

    a. Two   b. Three

    c. Four   d. Five

    e. None of the above.

38. How many numbers from 1 to 100 are divisible by 12 but are not divisible by 36.

    a. Eight   b. Seven

    c. Five   d. Six

    e. Two

39. In the series   **6 4 1 2 2 8 7 4 2 1 5 3 8 6 2 1 7 1 4 1 3 3 2 8 6.**
How many pairs of alternate numbers have a difference by 2.

    a. One   b. Two

    c. Three   d. Four

40. How many even numbers are there in the following sequence of numbers are immediately followed by an odd number as well as immediately preceded by an even number.

             8 6 7 6 8 9 3 2 7 5 3 4 2 2 3 52 2 8 1 1 9

    a. One   b. Three
    c. Four   d. Six

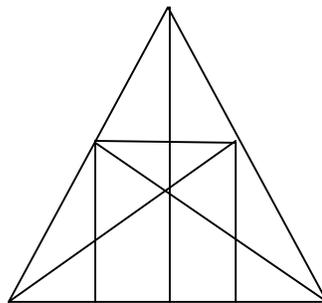**Direction (Question 41 to 45): In the following questions, find out the number of figures given below:**

41. Find the number of triangles in the following figure.

   a. 9   b. 10
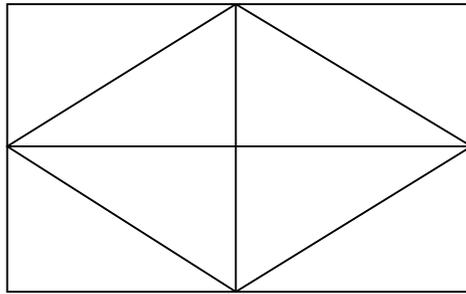
   c. 11   d. 12

   e. 8
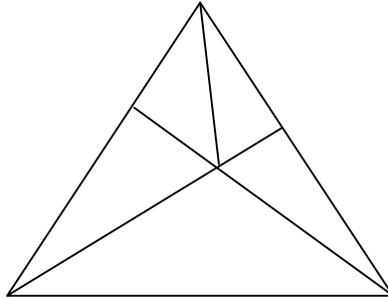
42. How many straight lines contained in the diagram given below?

   a. 9   b. 10

   c. 11   d. 12
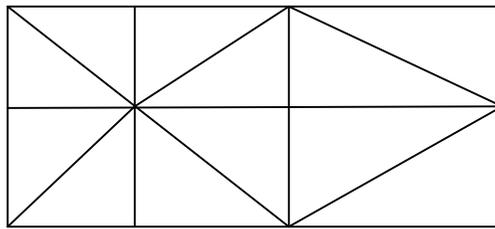
   e. 15

43. How many Triangles contained in the figure given below?

   a. 8   b. 10

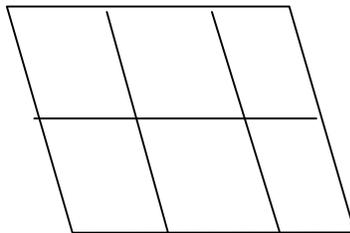   c. 12   d. 14

   e. 11

44. How many squares contained in the following figure.

   a. 6   b. 7

   c. 8   d. 9

   e. 10

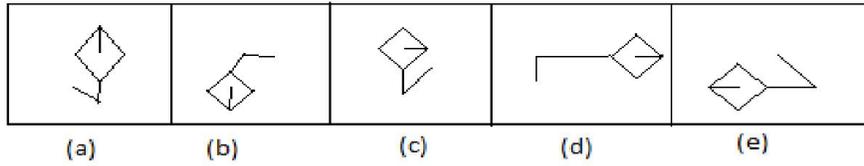45. How many Parallelogram are there in the figure given below?

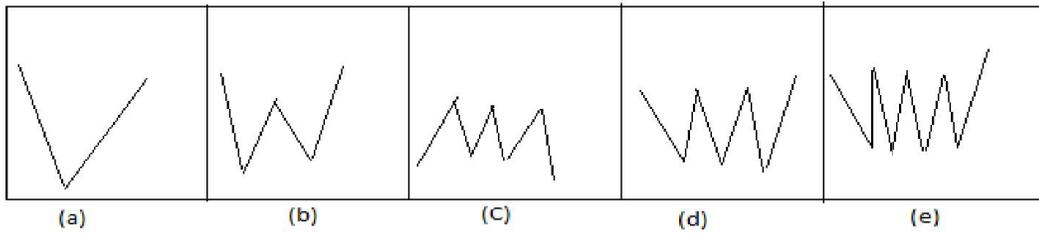   a. 14   b. 15

   c. 16   d. 18

   e. 10

Direction (Q No. 46 to 50) : Out of the figure (a) (b) (c) (d) and (e), given in each problems, four are similar in a certain way. However, one figure is not like the other four.

46. Encircled the figure which is different from the rest.

(a)　　(b)　　(c)　　(d)　　(e)

47. Encircle the figure which is different from the rest.

(a)　　(b)　　(C)　　(d)　　(e)

48. Encircle the figure which is different from the rest.

(a)　　(b)　　(c)　　(d)　　(e)

11
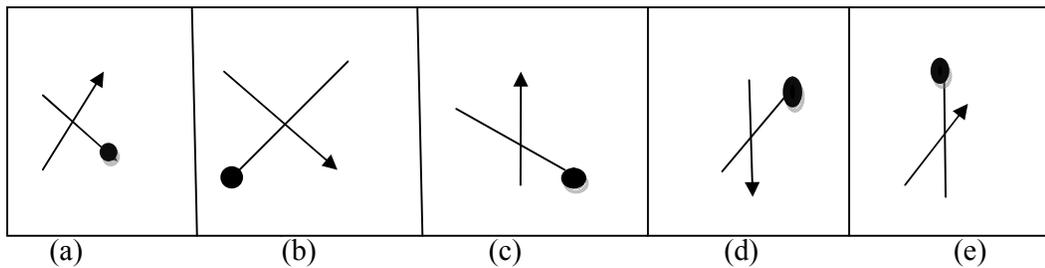
49. Encircle the figure which is different from the rest.

| (a) | (b) | (c) | (d) | (e) |

50.

| (a) | (b) | (c) | (d) | (e) |

12
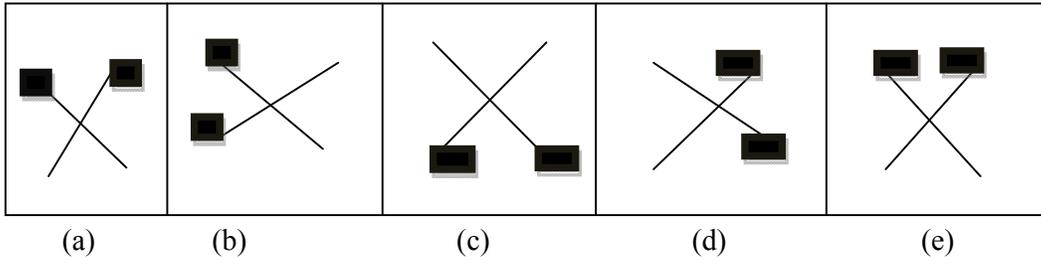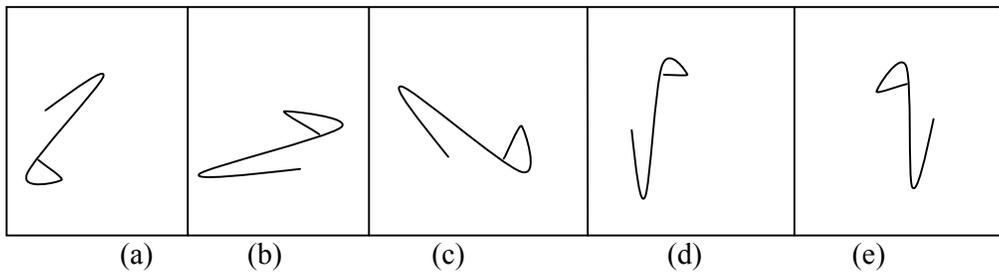
LANGUAGE COMPREHENSIVE TEST

Q. 1-5 Read the following passage and answer the questions that are given after it.

Sleep is crucial to maintaining one's health. Without it, we increase our susceptibility to an astonishing array of health problems, including heart disease, stroke, diabetes, obesity and depression. Not sleeping enough can compromise your immune system, says Stanley Coren, noted professor of psychology and author of the very popular book, "Sleep Thieves". You eat well and exercise in order to keep your immune system up, Coren goes on to explain, but if you aren't sleeping, you undo all that good work. "The immune system works best when you are sleeping," he says. "That's when your natural killer cells are generated."

Natural killer cells are produced in the bone marrow and found in the blood and lymph fluid. They are part of the body's defense mechanism against viruses, bacteria, even cancer, and they do not work properly in the persons who are sleep deprived.

Sleep is important in keeping not only our waistline trim, but ensuring a balanced brain activity too. During sleep, brain neurotransmitters- the chemicals that deliver messages between nerve cells in the brain- are replenished. When we do not sleep well, our brain chemicals become depleted which leads to emotional disturbances like depression, anxiety and general feelings of sadness, anger and irritation.

1. Lack of sleep

   a) decreases laziness

   b) weakens the body's capacity to combat disease

   c) helps youngsters do well in their examinations

   d) prevents a person from gaining weight

2. Our Immune system works best when we

   a) eat well, exercise and have proper sleep

   b) sleep all the time without proper food and exercise

   c) eat good food without exercise and proper sleep

   d) eat well and exercise without proper sleep

3. Natural killer cells are produced in

   a) the brain

   b) the bone marrow

   c) the liver

   d) the spinal cord

4. Natural killer cells

a) make a person look old pretty quickly

b) are produced in large numbers when we stay awake

c) help us fight viruses and bacteria

d) work well even for sleep- deprived people

5. If we don't sleep well,

a) we may lose our appetite

b) we may become very thin

c) production of brain chemicals increases

d) our brain may stop functioning in a balanced manner

Q. 6- 10 Read the following passage and answer the questions that are given after it.

Jane Goodall was born in London, England, on April 3, 1934. On her second birthday, her father gave her a toy chimpanzee named Jubilee. Jubilee was named after a baby chimp in the London Zoo, and seemed to foretell the course Jane's life would take. From an early age, Jane was fascinated by animals and animal stories. By the age of ten, she was talking about going to Africa to live among the animals there. At the time, in the early 1940s, this was a radical idea because women did not go to Africa by themselves……

In July of 1960, Jane and her mother arrived at Gombe National Park in what was then called Tanganyika and is now called Tanzania. Jane faced many challenges as she began her work. The chimpanzees did not accept her right away, and it took months for them to get used to her presence in their territory. But she was very patient and remained focused on her goal. Little by little, she was able to enter their world……

Dr. Jane Goodall is now the world's most renowned authority on chimpanzees, having studied their behavior for nearly 40 years. She has won numerous awards for her groundbreaking work. The Jane Goodall Institute for Wildlife Research, Education and Conservation was founded in 1977 in California but moved to the Washington, D. C. area in 1998. Its goal is to take the actions necessary to improve the environment for all living things.

6. What did Jane Goodall get as a birthday gift?

a) a baby chimp

b) a toy chimpanzee

c) a story book about animals

d) an animal from the London Zoo

7. The term 'radical' here means

   a) far- reaching   b) crazy

   c) unlawful   d) bold

8. Jane Goodall was able to go to Africa at the age of

   a) 30 years   b) 26 years

   c) 24 years   d) 25 years

9. 'She was able to enter their world….' this phrase means-

   a) she was able to reach Gombe National Park

   b) she was able to understand the communication of the chimpanzees

   c) she was able to study the behavior of the chimpanzees

   d) she was able to accept the chimpanzees into her world

10. The main goal of the Institute founded by Jane Goodall is

   a) To improve the environment for all living things

   b) To focus on the welfare of chimpanzees

   c) To have quality education

   d) To take necessary actions on the study done by environmentalists

Q. 11-15. Read the following passage and answer the questions that are given after it.

One day a plate made of gold fell from Heaven into the Court of a temple. On the plate these words were written. "A gift from Heaven to him who loves best". The priest made a proclamation that all who would like to claim the plate should assemble at the temple. Their kind deeds would be judged. Everyday many people came and claimed the plate. Three times the plate was given, but every time the plate turned into worthless lead. When it was dropped, it became gold again.

One day a simple peasant who had heard nothing of the plate came to the temple. When he saw the poor beggars near the temple, he was touched by their misery. He knelt and comforted a blind beggar. The priest who was holding the plate beckoned the peasant to come near him. The priest then offered the plate to the peasant. When the peasant took the plate in his hands it shone out with three times its former splendor. The priest said, "Son, the gift is yours; for you love best".

11. The gold plate was a gift to the person

   a) who loves the priest

   b) who loves God

   c) who loves another human being

   d) who loves gold and silver

12. Who would be judging the kind deeds of the people?

   a) the Heaven

   b) the priest

   c) the beggars

   d) the people themselves

13. How many times the gold plate turned into worthless lead?

   a) three times

   b) four times

   c) two times

   d) five times

14. The peasant came to the temple

   a) To claim the gold plate

   b) To beg

   c) To offer his prayers

   d) To sell his goods

15. The priest decided that the peasant love best because

   a) the peasant looks very innocent

   b) the peasant told him of his love for mankind

   c) there were no more people to claim the plate

   d) he saw the peasant comforting the blind beggar

Q. 16-17 The following five sentences come from a paragraph. The last and the first sentences are given. Choose the order in which the three sentences (PQR) should appear to complete the paragraph.

16. S1. Man is a social being.
    S2. _____
    S3. _____
    S4. _____
    S5. A good neighbor is a great blessing indeed.

    P-   Nobody can live alone and produce everything for himself or herself.
    Q-   Two persons living near each other are called neighbours.
    R-   People have been living together over the centuries

Choose from the options given below:

    1) PRQ   2) PQR

    3) QRP   4) QPR

17. S1. A small boy stood before the smithy and watched with awe and pity the terrible scene that went on inside.
    S2. _____
    S3. _____
    S4. _____
    S5. The man screamed with pain until he became too exhausted to even groan.

    P-   The blacksmith heated an iron rod until it was red hot.
    Q-   A man who had been bitten by a mad dog had been brought to the blacksmith.
    R-   As his assistants held the man down firmly, he plunged it into the wound.

Choose from the options given below:

    1) RQP   2) PQR

    3) PRQ   4) QPR

Q. 18- 19.Following questions have the second sentence missing. Choose the appropriate sentence from the given options to complete it.

18.   A.   A country is not built of rivers and rocks.

   B.   _____

   C.   The country rises or sinks with its people.

   1) This demands sincere workers who work when others sleep.

   2) The sense of duty rules their minds and they strive to better the lot of the country.

   3) They do not rest till they have achieved perfection in all fields.

   4) The entire strength of a nation is in its men.

19.   A.   The Newspaper is the greatest and most potent channel of expressing the opinion of the public.

   B.   _____

   C.   The leading articles of newspapers go a long way in forming public opinion and guiding the people during critical periods.

   1) The editorial also helps a lot in the forming of public opinion.

   2) It instructs the public as well as provides an opportunity for the expression of public opinion.

   3) It is the real architect of public opinion.

   4) The press keeps the public in touch with the day to day political, socio-economic changes all over the world.

Q. 20- 27. Choose the word which best fits the blank from the four options given.

20. Millions have laughed and _____ tears over Dicken's novels.

   1) shed   2) fall

   3) yield   4) secrete

21. His property will go to his _____ of kin.

   1) nearest   2) nearer
   3) near   4) next

22. Where is the _____ of keys, Sir?

   1) group   2) bunch
   3) pile   4) faction

23. My _____ has been called in question.

1) pride   2) pleasure

3) honesty   4) dignity

24. He has a _____ for good clothes.

1) fashion   2) favour

3) taste   4) fancy

25. The child was taken away _____ the mother.

1) from   2) off

3) to   4) for

26. _____ men in the world are honest.

1) Most   2) Little

3) Few   4) Many

27. Joe was _____ to Pip than his sister.

1) kind   2) kinder

3) kindest   *4)* most kind

Q. 28- 32. Select the meaning of the given idioms.

28. **tall talk**

1)   boasting   2) long speech

3) noisy   4) confusing

29. **to be a good Samaritan**

1)   to be obedient   2) a religious person

3) a citizen of Samaritana   4) a genuinely charitable person.

30.A child's play

1) a low- paid job   2) a simple work

3) an easy game   4) a perfect plan

31. **Gift of the gab**

1) to get something free   2)   to win a prize

3) talent for speaking   4) to be lucky.

32. turn down

    1) to stop   2) to reject

    3) to change   4) turn upside down

Q. 33- 40. In the following passage there are some numbered blanks. Fill in the blanks by selecting the most appropriate word for each blank from the given options.

It was first found _____ (33) southern China. Who doesn't love a _____ (34) of cool orange juice on a _____ (35) afternoon? The botanical name of orange _____ (36) citrus aurantium. The orange is one of the _____ (37) gifts of nature. Like all citrus fruits it is _____ (38) in vitamin C. It is the most popular citrus fruit. It was not originally _____ (39) in India. In India it was first introduced in the south, it _____ (40) become a household favourite in our country.

33.	1) on	2) in	3) inside	4) from
34.	1) jug	2) mug	3) glass	4) cup
35.	1) warm	2) hot	3) pleasant	4) beautiful
36.	1) was	2) is	3) are	4) were
37.	1) good	2) fine	3) finer	4) finest
38.	1) rich	2) abundant	3) plenty	4) great
39.	1) located	2) discover	3) found	4) known
40.	1) has	2) have	3) had	4) will

SCHOLASTIC APTITUDE TEST

PHYSICS

1. The speed of light in vacuum is
   - a. 3×10^{10} m/s
   - b. 3×10^8 m/s
   - c. 3×10^{10} cm/s
   - d. 3×10^8 cm/s

2. When light falls on a surface or boundary separating two media
   - a. usually a part is reflected
   - b. a part is transmitted
   - c. a part is absorbed
   - d. all of the above

3. The nature of image formed by a concave mirror is virtual and erect only when the position of the object is
   - a. at infinity
   - b. at centre of curvature
   - c. between the centre of curvature and the focus
   - d. between the pole of the mirror and the focus

4. The image formed by a convex mirror is always
   - a. real, erect and diminished in size
   - b. virtual, erect and diminished in size
   - c. virtual enlarged and diminished in size
   - d. none of the above

5. The human eye can focus objects at different distances by adjusting the focal length of the eye lens. This is due to.
   - a. accommodation
   - b. near sightedness
   - c. farsightedness
   - d. persistence of vision

6. The human eye forms the image of an object at its
   - a. cornea
   - b. retina
   - c. pupil
   - d. iris

7. Cinematography makes use of

    a. accommodation   b. least distance of distance vision

    c. persistence of vision   d. bi-focal lens systems

8. Myopia is corrected by using a

    a. convex lens   b. bifocal lens

    c. cylindrical lens   d. concave lens

9. Which of the following represents current

    a. cs^{-1} b. $dynes^{-1}$

    c. $erg\ c^{-1}$ d. $erg\ s^{-1}$

10. Which of the following represents Potential difference

    a. Jc   b. cs^{-1}

    c. Js   d. A.c.

11. Detection of magnetic effects of electric currents was done by

    a. Oersted experiment   b. Hertz experiment

    c. Maxwell's experiment   d. Joule's experiment

12. Direction of deflection of coil in moving coil galvanometer can be obtained by applying.

    a. Fleming's Left hand rule   b. Fleming's Right hand rule

    c. Ampere's rule   d. None of the above

CHEMISTRY

1) If we open a bottle of perfume, its smell spreads in the entire room within a short time due to the process of.

    a. Evaporation   b. Sublimation

    c. Diffusion   d. Decantation

2) Which of the following statements about a balanced chemical equation is true?

    a. mass is conserved   b. action are conserved

    c. mass as well as atoms are conserved   d. molecules are conserved

3) Which of the following is acidic in nature?

    a. Apple juice   b. Soap Solution

    c. salted lime   d. lime

4) The term 'PH' comes from

    a. Hydrogen purity   b. Pure Hydrogen

    c. Hydrogen power   d. Purity and Hydrogen

5) Isotopes differ in

    a. no. of electrons   b. no. of protons

    c. no. of neutrons   d. chemical reactivity

6) Which amongst the following is not a noble gas?

    a. Helium   b. Neon

    c. Radium   d. Radon

7) Which amongst the following is a non-polar molecule

    a. NH_3 b. HCl

    c. CCl_4 d. H_2O

8) In the reaction $H_2S + Cl2$

    a. H_2S b. Cl_2

    c. HCl   d. S

9) Which of the following gas is known as illuminating gas?

    a. Ethane   b. Ethene

    c. Ethyne   d. Propane

10) Crystalline form of Carbon having 60 Carbon atoms joined together

    a. Polymer   b. Buckminster Fullerene

    c. Coal   d. Diamond

11) The tip of the lead pencil is made of

    a. Lead   b. Graphite

    c. Zinc   d. Charcoal

BIOLOGY

1. Organisms like Amoeba and Paramecium, frogs and human beings shows

   a. Parasitic Nutrition
   b. Saprophytic Nutrition
   c. Holozoic Nutrition
   d. All of the above

2. Which of the following meristem helps in increasing the length of stem and roots?

   a. Intercalary meristem
   b. Apical meristem
   c. Lateral meristem
   d. All of the above

3. According to Binomial System of nomenclature, each organisms has scientific name consisting of.

   a. Genus
   b. Genus and family
   c. Species and Family
   d. Genus and Species

4. Which of the following is known as amphibian of plant kingdom

   a. Thallophyte
   b. Pteridophyte
   c. Bryophyte
   d. None of the above

5. Cristae are found in

   a. Endoplasmic Reticulum
   b. Golgi apparatus
   c. Lysosomes
   d. Mitochondria

6. Major part of a Walnut shell is made up of.

   a. Parenchyma tissue
   b. Collenchyma tissue
   c. Sclerenchyma tissue
   d. Aerenchyma tissue

7. Which of the following is not part of large intestine.

   a. The Caecum
   b. The Colon
   c. The Ileum
   d. The Rectum

8. The blood vessels that carry blood from the body parts to the heart is.

   a. Cappilaries   b. Veins

   c. Arteries   d. All of the above

9. Man, Tiger, Elephant, Whale belongs to class

   a. Mammalia   b. Amphibia

   c. Reptilia   d. Aves

10. Typhoid, cholera and pneumonia are diseases caused by

   a. Virus   b. Bacteria

   c. Fungi   d. Protozoa

11. The process of getting pure water from a concentrated solution through a semi-permiable membrane is called.

   a. Endosmosis   b. Exosmosis

   c. Reverse Osmosis   d. Plasmolysis

12. The part of the brain which governs mental abilities like thinking , learning, memorizing is

   a. Cerebrum   b. Cerebellum

   c. Mid-brain   d. Medulla oblonganta

SOCIAL SCIENCE

HISTORY

1. The People of France were force to protest and agitate because of:

   a. French war with Britain   b. High price of bread

   c. Lack of employment   d. Stark poverty

2. In 1897 the working day was officially established at:

   a. 12 hours   b. 11 ½ hours

   c. 9 hours   d. 8 ½ hours

3. The British during their rule of India perceived the forest as :

   a. useful   b. productive

   c. unproductive   d. destructive

4. The most severe event to strike the United states was :

   a. Dust bowl drought   b. Agricultural Depression

   c. Raids under captain swing   d. Hurricane

5. 30[th] December is declared a state holiday to mark the death anniversary of:

   a. Tirot Singh   b. U Kiang Nongbah

   c. Pa Togan Sangma   d. Soso Tham

6. Who hosted the congress of Vienna in 1815?

   a. Cavour   b. Matternich

   c. Charles Albert   d. Daniele Manin

7. The Non- Cooperation Movement was launched on:

   a. 1[st] August 1919   b. 1[st] August 1920

   c. 1[st] August 1922   d. 1[st] August 1932

8. Where did the Industrial Revolution Start?

   a. USA   b. India

   c. England   d. France

9. The Bombay Cotton Textile was established in :

   a. 1844   b. 1854

   c. 1864   d. 1874

10. Richard Johnson launched newspaper and journals known as:

   a. The Bombay Harald   b. The Madras Courier

   c. The Jesuits of Goa   d. The Bengal Gazette

GEOGRAPHY

1. The Wharton Trench is the deepest trench in the :

    a. Atlantic Ocean
    b. Indian Ocean
    c. Pacific Ocean
    d. Arctic Ocean

2. The narrow stretch of water connecting two big water bodies is:

    a. Isthmus
    b. Rift valley
    c. Strait
    d. Delta

3. Plant species identified in the mangrove forests in India is:

    a. 1400
    b. 1500
    c. 1600
    d. 1700

4. The Project Tiger in India was launched in the year:

    a. 1973
    b. 1974
    c. 1975
    d. 1976

5. In India the biggest sugarcane belt is in:

    a. Andhra Pradesh and Karnataka
    b. Madhya Pradesh and Karnataka
    c. Madhya Pradesh and Uttarakhand
    d. Western Uttar Pradesh and Lower Uttarakhand

6. The roof top harvesting has become a common practice in:

    a. Assam
    b. West Bengal
    c. Meghalaya
    d. Arunachal Pradesh

7. The largest wind farm cluster in India is:

    a. Kerela
    b. Maharashtra
    c. Karnataka
    d. Tamil Nadu

8. The region which has the maximum concentration of iron and steel plants:

    a. Chhota Nagpur Plateau   b. Malwa Plateau

    c. Meghalaya Plateau   d. Deccan Plateau

9. The Myntdu-Leshka project is in :

    a. West Khasi Hills   b. East Khasi Hills

    c. Jaintia Hills   d. Bhoi

10. The percentage of food grain production in Meghalaya is:

    a. 44.8%   b. 45.8%

    c. 46.8%   d. 47.8%

CIVICS

(1) Under which article of the Indian Constitution safeguard the citizens to conserve distinct language, script or culture?

    a. Art 28 (a)

    b. Art 28(b)

    c. Art 29 (a)

    d. Art 30

(2) People belonging to the untouchable class are known as

    a. Citizens

    b. Scheduled Tribe

    c. Scheduled Caste

    d. Hanjans

(3) Santhals in Bengal, bihar and Orissa are categorized as

    a. Scheduled Tribe

    b. Scheduled Caste

    c. Other Backward Classes

    d. General

(4) The Mandal Commission was set up under the Prime Ministership of

    a. Jawaharlal Nehru

    b. Moranjan Desai

    c. Indira Gandhi

    d. Narendra Modi

5) Who wrote "Sare Jahan Se Acchha Hindustan Hamara"?

    a. Rabindra Nath Tagore

    b. M. K. Gandhi

    c. Muhammed Iqbal

    d. Bankim Chnadra

6) "Right to vote" is a

   a. Political right
   b. Economic Right
   c. Civil Right
   d. Legal Right

7) The Protection of Rights and Equal Protection Act was passed by the Government of India in the year

   a. 1995
   b. 1996
   c. 1997
   d. 1998

8) The World Trade Centre, New York and the Pentagon Building was bombed on

   a. 14th September, 2001
   b. 13th September, 2001
   c. 10 September, 2001
   d. None of the above

9) The Principles of Pancheel are

   a. Fair, Firm and Friendly
   b. Fair, Friendly and co-existence
   c. Friendly, Co-existence and Honour
   d. None of the above.

10) The Directing Principles of State Policy contains

   a. Part III of the Indian Constitution
   b. Part IV of the Indian Constitution
   c. Part IV-A of the Indian Constitution
   d. Part III-A of the Indian Constitution

ECONOMICS

1. Money forms the following functions:-

   a. Measure of value
   b. Medium of exchange
   c. Transfer of value
   d. All of the above.

2. Banking System in India is divided into :-

   a. 2 categories
   b. 3 categories
   c. 4 categories
   d. 5 categories

3. Multinational Corporations (MNCs) are:-

   a. Organisations that owns and controls production in more than one country
   b. Organisations that controls production is one country only.
   c. Organisations that owns and controls production in a foreign country
   d. organizations that only controls production in other countries

4. Agmark is a standard certification of:-

   a. Gold
   b. Oils
   c. Agricultural products
   d. Industrial Products

5. The main features of NREGA is:-

   a. Provides employment for 1 whole year
   b. Provides employment for 100 days a year
   c. Provides Employment exclusively for men
   d. Funded by the State Government only.

MATHEMATICS

1. Every rational number is

   1. a natural number
   2. an integer
   3. a real number
   4. a whole number

2. If two positive integers a and b are written as $a = x^3 y^2$ and $b = xy^3$, where x , y are prime numbers, then HCF (a, b) is

   1. xy
   2. xy^2
   3. x^3y^3
   4. x^2y^2

3. If one of the zeroes of the quadratic polynomial $(k-1) x^2 + kx + 1$ is -3, then the value of k is.

   1. $\dfrac{4}{3}$
   2. $\dfrac{-4}{3}$
   3. $\dfrac{2}{3}$
   4. $\dfrac{-2}{3}$

4. The degree of the zero polynomial is

   1. 0
   2. 1
   3. any natural number
   4. not defined

5. Which constant should be added and subtracted to solve the quadratic equation $4x^2 - \sqrt{3}x - 5 = 0$, by the method of completing the squares?

   1. $\dfrac{9}{6}$
   2. $\dfrac{3}{16}$
   3. $\dfrac{3}{4}$
   4. $\dfrac{\sqrt{3}}{2}$

6. If a pair of linear equations is consistent, then the lines will be

   1. parallel
   2. always coincident
   3. intersecting or coincident
   4. always intersecting

7. Which of the following is not a quadratic equation?

    1. $(x-1)^2 +1 = 2x-3$ 2. $x(2x+3)=x^2+1$

    3. $(x+2)^3=x^3-4$ 4. $x(x+1)+8=(x+2)(x-2)$

8. Which of the following equations has two distinct real roots?

    1. $2x^2-3\sqrt{2}x+\frac{9}{4}=0$ 2. $x^2+3x+2\sqrt{2}=0$

    3. $x^2+x-5=0$ 4. $5x^2-3x+1=0$

9. The sum of first 16 terms of the AP:10,6,2… is

    1. -320 2. 352

    3. -400 4. 640

10. In triangles ABC and DEF, $\angle B =\angle E$, $\angle C=\angle F$ and AB $=$3DE. Then, the two triangles are

    1. congruent but not similar   2. similar but not congruent

    3. neither congruent nor similar   4. similar as well as congruent.

11. The distance of the point P(-6, 8) from the origin is

    1. $2\sqrt{7}$ 2. 8

    3. 10   4. 14

12. If $\triangle$ABC is right angled at C, then the value of cos (A+B) is

    1. 0   2. 1

    3. $\dfrac{1}{2}$ 4. $\dfrac{\sqrt{3}}{2}$

13. The angle of elevation of the sum when the shadow of a pole h meters high is $\sqrt{3}$h meters long, is

    1. 90°   2. 60°

    3. 45°   4. 30°

14. If angle between two radii of a circle is 130°, the angle between the tangents at the ends of the radii is

    1. 40°   2. 50°

    3. 70°   4. 90°

15. The area of a circle that can be inscribed in a square of side 6cm is

    1. 36π cm^2 2. 18π cm^2

    3. 12π cm^2 4. 9π cm^2

16. The area of a sector of circle of radius 21cm and angle of the sector 120°, is

    1. 593 cm^2 2. 462 cm^2

    3. 382 cm^2 4. 216 cm^2

17. A solid piece of iron in the form of a cuboid of dimensions 49 cm x 33 cm x 24 cm is moulded to form a solid sphere. The radius of the sphere is

    1. 29 cm   2. 23 cm

    3. 21 cm   4. 19 cm

18. In the right circular cone, the cross-section made by a plane parallel to the base is a

    1. circle   2. frustum of a cone

    3. sphere   4. hemisphere

19. Construction of a cumulative frequency table is useful in determining

    1. mean   2. median

    3. mode   4. both mean and median

20. A bag containing 3 red balls, 5 white balls and 7 black balls, the probability that a ball drawn from the bag is at random will be neither red nor black is .

    1. $\dfrac{3}{7}$ 2. $\dfrac{2}{3}$

    3. $\dfrac{1}{5}$ 4. $\dfrac{1}{3}$

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING
MEGHALAYA, SHILLONG
NATIONAL TALENT SEARCH (STATE LEVEL 2014-15)
MENTAL ABILITY TEST
KEY ANSWER

	Mental Ability Test				
Q. No	**Alternatives**	**Q. No**	**Alternatives**	**Q. No**	**Alternatives**
1	D	21	C	41	D
2	C	22	C	42	A
3	D	23	C	43	C
4	C	24	A	44	D
5	C	25	D	45	D
6	B	26	C	46	C
7	C	27	B	47	C
8	B	28	B	48	E
9	B	29	D	49	C
10	B	30	E	50	D
11	A	31	B		
12	E	32	C		
13	A	33	B		
14	C	34	B		
15	A	35	C		
16	C	36	C		
17	B	37	A		
18	A	38	D		
19	B	39	B		
20	D	40	C		

	Language Comprehensive Test				
Q. No	**Alternatives**	**Q. No**	**Alternatives**	**Q. No**	**Alternatives**
1	B	16	1	31	3
2	A	17	4	32	2
3	B	18	4	33	2
4	C	19	3	34	3
5	D	20	1	35	2
6	B	21	4	36	2
7	A	22	2	37	4
8	B	23	3	38	1
9	C	24	3	39	3
10	A	25	1	40	1
11	C	26	3		
12	B	27	2		
13	A	28	1		
14	C	29	4		
15	D	30	2		

Signature of Invigilator with date ………………………………….

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING
MEGHALAYA, SHILLONG
NATIONAL TALENT SEARCH (STATE LEVEL 2015)
SCHOLASTIC APTITUDE TEST
KEY ANSWER

Physics		Chemistry		Biology		History	
Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	B	1	C	1	C	1	B
2	D	2	C	2	B	2	B
3	D	3	A	3	D	3	C
4	B	4	C	4	C	4	A
5	A	5	C	5	D	5	B
6	B	6	C	6	C	6	B
7	C	7	C	7	C	7	B
8	D	8	B	8	B	8	C
9	A	9	C	9	A	9	B
10	A	10	B	10	B	10	B
11	A	11	B	11	C		
12	A			12	A		

Geography		Civics		Economic		Mathematics	
Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	B	1	A	1	D	1	3
2	C	2	D	2	B	2	2
3	C	3	A	3	A	3	1
4	A	4	B	4	B	4	4
5	C	5	C	5	B	5	2
6	C	6	A			6	3
7	D	7	A			7	4
8	A	8	D			8	3
9	C	9	A			9	1
10	D	10	C			10	2
						11	3
						12	1
						13	4
						14	2
						15	4
						16	2
						17	3
						18	1
						19	2
						20	4

Signature of Invigilator with date ………………………………….

Class X Code	State Code	Year	Centre Code	Serial No.

| 2 | | 1 | 4 | | 1 | 5 | | | | | | | | | | |

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING
MEGHALAYA: SHILLONG

NATIONAL TALENT SEARCH (STAGE ONE) EXAMINATION 2015-16.

Part I (a) Mental Ability Test   *- 45 minutes*   *Maximum Marks -50*
     (b) Language Comprehensive Test   *-45 minutes*   *Maximum Marks -50*
Part II   Scholastic Aptitude Test   *-90 minutes*   *Maximum Marks-100*

INSTRUCTIONS TO CANDIDATES
Read the following instructions carefully before you open the Question Booklet.

1. Answers are to be given on a separate **ANSWER SHEET.**

2 Please write your Centre Code no. and Serial No. very clearly (only one digit in one block) as given in your Admit Card.

3. Please note that no block is left unfilled and even zeroes appearing in the Centre Code no. and Serial no. Each digit are to be correctly transferred to the appropriate block on both **QUESTION BOOKLET** and the **ANSWER SHEET**. For all subsequent purposes your Centre Code no. and Serial no. shall remain the same even when you are allowed a change of centre.

4. Avoid over writing the numbers/ digits for both Centre Code and Serial No.

5. The Question Booklet and Answer Sheet are consisting of Two Parts. Each Part consists 100 questions.

6. All Questions carry one mark each.

7. All Questions are Compulsory.

8. Every correct answer will be awarded 1 mark

9. Begin with the first question and keep trying one question after another till you finish both the parts.

10. Since the time allotted to this Questions Booklets is very limited you should make the best of it by not spending time on any one question.

11. The answer sheet has two parts Part I and Part II of the Question Booklet. In Part II, answers to a subject are to be given under the column where the name of the subject is given

12. Answer to each question is to be indicated by encircling around alternative **1 or 2 or 3 or 4 or 5 OR a or b or c or d or e** from amongst the ones given for the corresponding questions in the question Booklet, e.g.., if you think that alternative 1 is correct then encircle as example given below.

     (1)   or   (a)

13. Now turn to the next page and start answering the questions.

14. **Hand over your Question Booklet and Answer Sheet to the invigilator before you leave the Examination Hall.**

TIMING 10:00 AM TO 1:00 PM

N.B. Do not write anything except Serial No. and rough work anywhere in this Booklet

MENTAL ABILITY TEST

Directions (Q. Nos. 1-5): Given below are based on letter series in which some letters are missing. The missing letters are given in a proper sequence as one of the alternatives among the four alternates under each question. Choose the correct alternates.

1) a – bbc – aab – cca – bbcc
   a. bacb
   b. acba
   c. abba
   d. caba

2) ab – bc –c – ba – c
   a. baac
   b. aabb
   c. caab
   d. aaab

3) aab – aaa- bba –
   a. baa
   b. abb
   c. bab
   d. aab

4) – acca – ccca – acccc – aaa
   a. acca
   b. caaa
   c. ccaa
   d. caac

5) – CP – D – P – DC – I
   a. DCIPD
   b. ICCIP
   c. PCICD
   d. DICIP

Directions (Q. Nos. 6-15): In each of the following questions, four of the following five are alike in a certain way and so form a group. Which is the one that does not belong to that group?

6) a. Driving   b. Sailing
    c. Diving   d. Fishing
    e. Swimming

7) a. Blue   b. Green
    c. Yellow   d. Orange
    e. Pink

8) a. Haryana   b. Gujarat
    c. Kerala   d. Tamil Nadu
    e. Maharashtra

9) a. Photograph   b. Poster
    c. Scenery   d. Picture
    e. Painting

10) a. Asia   b. Europe

    c. Australia   d. Africa
    e. Canada

11) a. Apple   b. Orange
    c. Carrot   d. Guava
    e. Tomato

12) a. January   b. February
    c. April   d. August
    e. October

13) a. Actor   b. Dancer
    c. Musician   d. Poet
    e. Artist

14) a. See   b. Hear
    c. Smell   d. Taste
    e. Think

15) a. Odour   b. Smell
    c. Foul   d. Fragrance
    e. Incense

Directions (Q. Nos. 16-20): In each of the following questions, a related pair of words in CAPITAL letter is followed by four parts of words as alternate. Choose a pair in which the words bear the same relationship to each other as the words of the given pair bear.

16) COAL : HEAT : : WAX : ?
   a. ENERGY
   b. CANDLE
   c. LIGHT
   d. BEE

17) HAPPINESS : SORROW : : ? : ?
   a. POVERTY:WEALTH
   b. REST: SLEEP
   c. COMFORT: HARDSHIP
   d. DIFFICULTY:RELAXED

18) KING: CROWN : : ? : ?
   a. PRIEST : MITRE
   b. TEACHER : CHALK
   c. SOLDIER : GUN
   d. SCULPTOR : CHISEL

19) SIGNAL: TRAFFIC: : ? : ?
   a. DOOR: HOUSE
   b. DAM : RIVER
   c. LENS : LIGHT
   d. OPERATION : DOCTOR

20) MATHEMATICS: NUMBERS : : ? : ?
   a. PEOPLE: FAMILY
   b. HISTORY: EVENTS
   c. DATES:MONTHS
   d. WAR : VICTORY

Directions (Q.Nos. 21-25): In the following questions you are to select the correct answers bases on the statements in the given questions.

21) If PAINT is coded as 74128 and EXCEL is coded as 93596, then how would you decode ACCEPT?

   a. 455978

   b. 547978

   c. 554978

   d. 735961

22) If D=4, and cover=63, then BASIS=?

   a. 49

   b. 50

   c. 54

   d. 55

23) In a certain language, NEOMAN is coded as OGRQFT which word would be coded as ZKCLUP?

   a. YJBKTO

   b. XIAJSN

   c. YIZHPJ

   d. YIAQKJ

24) In a certain language, SIKKIM is coded as THLJJL, then how will training be coded?

   a. SQBHOHOH

   b. UQBHOHOF

   c. UQBHOHHO

   d. UQBJOHOH

25) If diamond is called gold, gold is called silver, silver is called ruby and ruby is called emerald, which is the cheapest jewel?

   a. Silver

   b. Ruby

   c. Diamond

   d. Gold

Directions (Q. Nos. 26-30): In the following questions, find the missing character in the figure.

26)
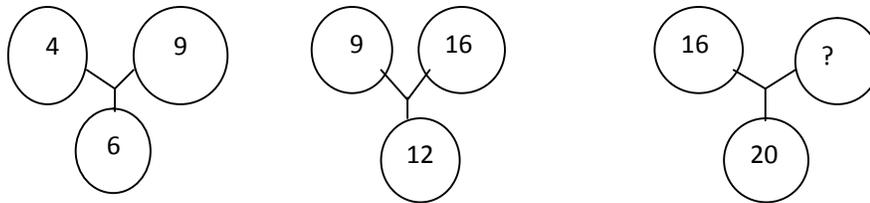
a. 60
b. 40
c. 50
d. 25
e. 320

27)

4	5	6
2	3	7
1	8	3
21	98	?

a. 94
b. 76
c. 73
d. 16
e. 70

28)

143   3

99   15

?   35
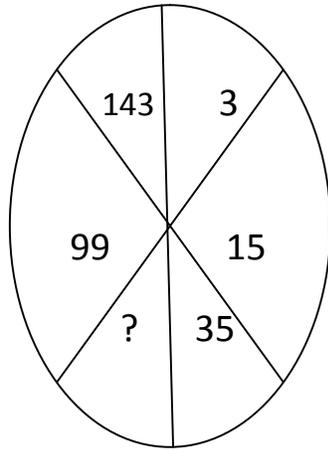
    a. 63
    b. 56
    c. 60
    d. 65
    e. None of the above

29)

6
5   8
5
492
7   9
5
4

5
7   4
572
6   9
8

3
4
?
7
2
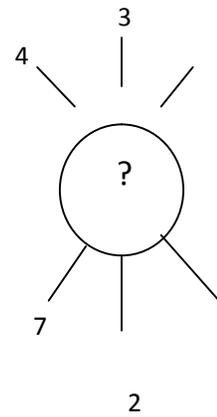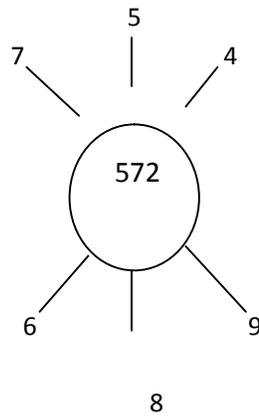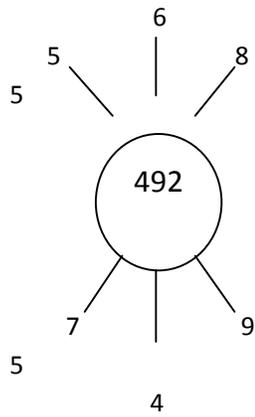
    a. 115
    b. 130
    c. 135
    d. 140
    e. 155

30)
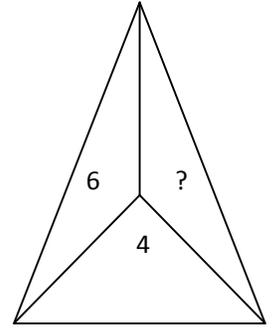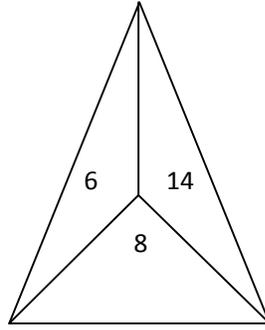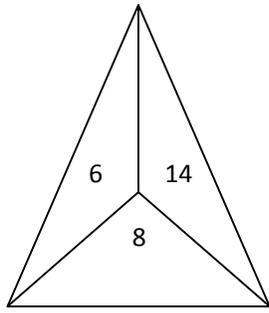
    a. 6
    b. 8
    c. 10
    d. 14
    e. 16

Directions (Q. Nos. 31-35): to each of the following questions four probable answers have been given as alternatives. Select the best alternatives as your answers.

31) Your classmate, who is usually very smart and happy all the time, looks very down and upset. You
    a. Carry on with your work

    b. Tell one of your friends to go and talk to him/her

    c. Go unto him/her and ask the reason

    d. Wait for him/her to come up and tell you the reason

32) You are in a new place and you want to go shopping, what is the most likely thing that you would do?
    a. You totally drop the idea of shopping

    b. Find out the place on your own

    c. Ask someone who knows the place for directions

    d. Ask someone else to do shopping for you

33) You are returning home from school. On the way you find a sealed envelope in a street fully addressed with un-used stamps on it. You would
    a. Leave it there and walk away

    b. Remove the stamp and destroy the envelope

    c. Open the envelope and find out who has dropped it by mistake, and send it to him if possible

    d. Post it at the nearest letter box

34) While you board a train at a station, you find a suitcase beneath your seat. You would
   a. Report the matter to the police
   b. Open up the suitcase and see what is inside
   c. Try to find out the address of the owner from the papers etc in the suitcase
   d. Finding no one to claim it, take it into your own possession

35) Your friend accidentally spills soft drinks on you in a party. You
   a. Spoil his/dress too
   b. Snub him/her
   c. Say it is OK
   d. Just laugh it off

Directions (Q. Nos. 36-40): Study the following questions properly and answer them out of the alternatives.

36) In a row of students of a class facing the North, A is 16^{th} from the left end and C is 16^{th} from the right end. B, who is fourth to the right of A, is fifth to the left of C in the row. How many students are there in the class?

   a. 38
   b. 46
   c. 32
   d. 40

37) Mohan and Sohan are ranked seventh and eleventh respectively from the top in a class of 41 students. What will be their respective ranks from the bottom in the class?
   a. 30^{th} and 34^{th}
   b. 34^{th} and 30^{th}
   c. 35^{th} and 31^{st}
   d. 36^{th} and 32^{nd}

38) In the following number sequence, how many such even numbers are there which are exactly divisible by its immediate preceding number but not exactly divisible by its immediate following number?

3 8 4 1 5 7 2 8 3 4 8 9 3 9 4 2 1 5 8 2

   a. One

   b. Two

   c. Three

   d. Four

39) 01/08/2007 is the first Wednesday. Which is the fourth Saturday of August 2007?

   a. 25/8/2007

   b. 26/08/2007

   c. 24/08/2007

   d. 22/08/2007

40) In a class of 60, the number of girls is twice that of boys. Kamal ranked seventeenth from the top. If there are nine girls ahead of Kamal, how many boys are after him in rank?
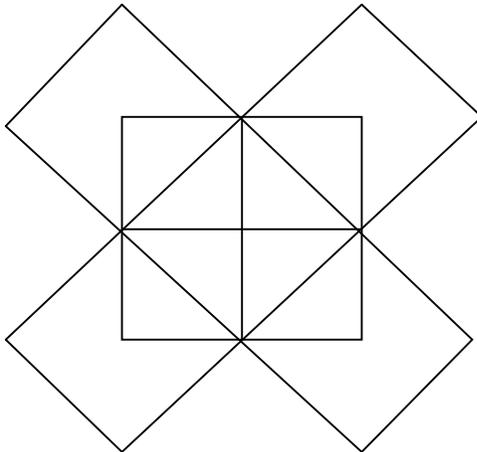
   a. 3

   b. 7

   c. 12

   d. 23

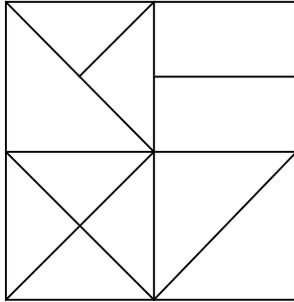**Directions (Q. Nos. 41-45): in the following questions, find the number of figures given below.**

41)
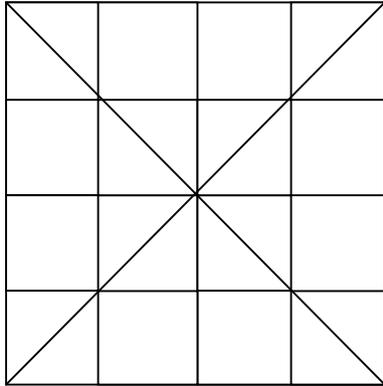
a. 11
b. 12
c. 14
d. 15
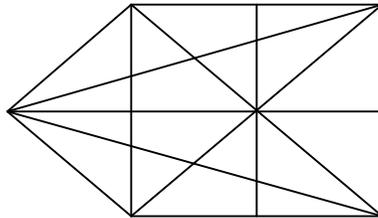
42) How many rectangles does the following figure have?

a. 10
b. 13
c. 14
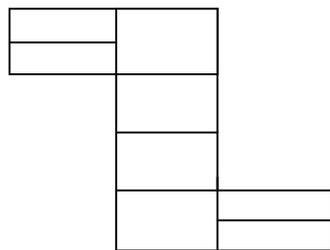d. 12

43) How many triangles are there in the diagram?

    a. 10   c. 16
    b. 13   d. 14

44) Find the number of straight lines in the following figure?

    a. 10
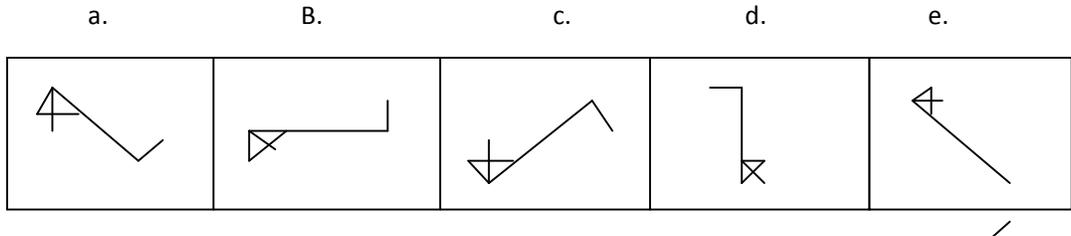   b. 11
    c. 12
    d. 13
    e. 17

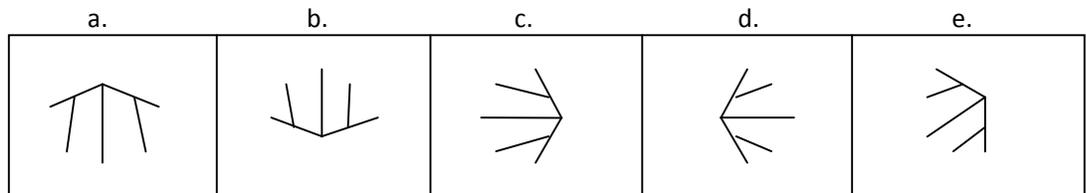45) Count the number of rectangle in the following figure

    a. 17
    b. 12
    c. 16
    d. 19
    e. 10

Directions (Q.Nos. 46-50): Out of the figure (a)(b)(c)(d) and (e), given in each problem, four are familiar in certain way. However, one figure is not like the other four.

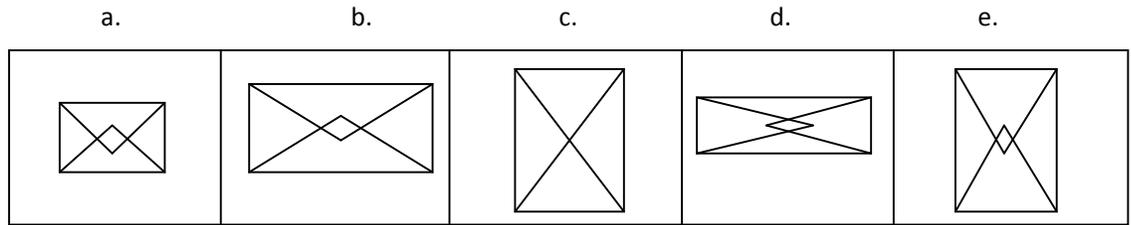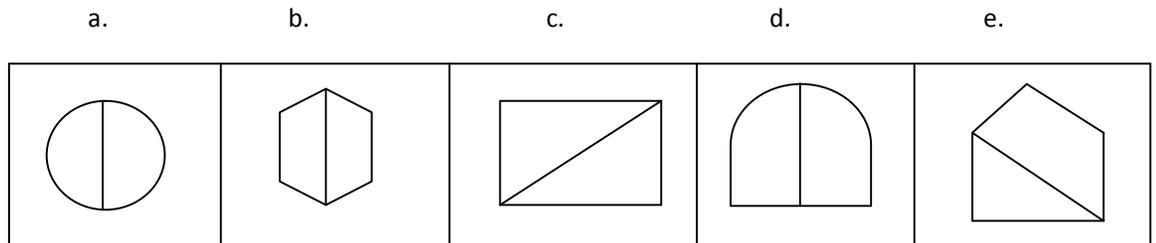46) Point out the figure which is different from the others.

a.   B.   c.   d.   e.

47) Encircle the figure which is different.

a.   b.   c.   d.   e.

48)

a.   b.   c.   d.   e.
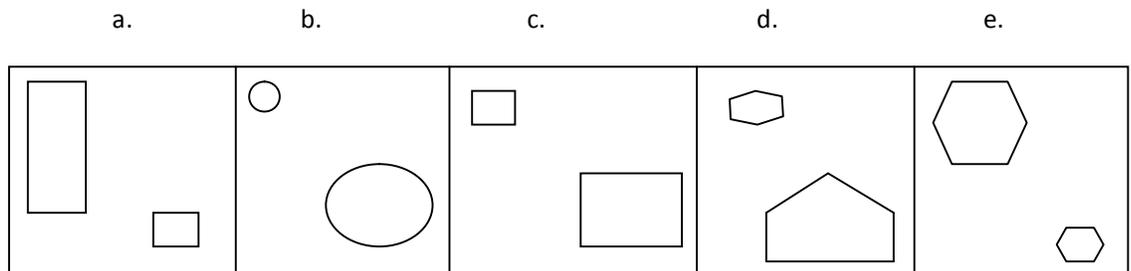
49)

a.   b.   c.   d.   e.

50)

a.   b.   c.   d.   e.

LANGUAGE COMPREHENSIVE TEST

Q 1-5 Read the passage below and answer the questions given after it.

People of long ago used to live in groups in caves or in jungles. They wandered from place to place hunting animals and looking for food like nuts, roots, wild fruits and berries.

Then later people began to settle along or near rivers. They lived near the rivers because they were sources of water, food, trade and transport. They used the river water for drinking, cooking and washing. Their animals also drank from these rivers.

The rivers were full of fish. Birds also lived and laid their eggs near rivers. Birds got their food from rivers too. As a result, these areas provided a good source of food for the people. the people caught the fish, collected the birds' eggs and trapped the birds as food.

Rivers also made good farmland for these early river settlers. during the yearly flood, rivers carried along with them river mud which was very fertile. this fertile soil was left behind after each flood. Thus river banks or valleys were suitable places for farming. The people started to cultivate their own crops. This means they could settle down in one place and they didn't have to wander in search of food any more.

Besides the fertile soil, rivers were also used as a form of highway. Men began to use rafts and boats as a form of water transport to carry their extra food. they sailed to another part of the river to trade with the other settlers. So they became farmers as well as trades. When they began to travel up and down the rivers, they learned about the customs and beliefs of the other settlers.

As trade and transportation grew, the population also grew. These river settlements grew into cities, and these cities became centers of great civilizations like those found in early Egypt, India and China. These civilizations had powerful governments with many laws and government workers. Then these cities grew into some of the important and powerful countries in the world.

1. Why did people of long ago settle along rivers?

(a) Because there were sources of water for drinking, cooking and washing.
(b) Because there were sources of food like fish, birds' eggs and birds.
(c) Because there were sources of food, water, trade and transport.
(d) Because there were sources of food like nuts, roots, fruits and berries.

2. Why were river banks suitable for farming for the early settlers?

(a) Because yearly floods occurred there.
(b) Because the soil was fertile.
(c) Because the rivers carried along with them river mud.
(d) Because the early settlers could settle down there and cultivate their own crops.

3. The word cultivate can best be replaced with

(a) Obtain.
(b) Look for
(c) Buy
(d) Grow

4. How could rivers be used as a form of highway?

(a) Boats could sail up and down the rivers when the settlers traded with the others along the river.
(b) Rivers helped the settlers to become traders
(c) Rivers helped the settlers to carry their extra food.
(d) Rivers helped the settlers to learn about the customs and beliefs of the settlers

5. All the statements are true **except**

(a) As trade and transportation grew, the population of river settlements also grew

(b) As the river settlements grew, they became cities and centers of civilization.

(c) Egypt, India and China were at one time centers of great civilization.

(d) Egypt, India and China were the only important and powerful countries in the world to have rivers.

Q 6-9- Read the passage below and answer the questions given after it.

If you want a brief history of information technology, here is one. Humans were the first "computers". Then machines were invented to carry out the computational tasks. Now these machines have given way to new form of information technology. Information has become accessible from anywhere.

Information technology deals with the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a microelectronics-based combination of computing and telecommunications. Thanks to the continuous development of computers, the original computing systems became minicomputers and later personal computers took the lead. Nowadays, mobile phones are dethroning the personal computer and computing is evolving faster to become disembodied more like a **cloud**, becoming accessible more easily whenever needed. Information technology in this sense has transformed people and companies and has allowed digital technology to influence society and economy alike.

6. Information technology is changing principally because of:

(a) The changing needs

(b) New technological advances

(c) Man's laziness

(d) Easy lifestyle

7. According to the author the first computers were:
(a) Calculators

(b) Humans

(c) Robots

(d) Machines

8. Development of information technology is the result of:

   (a) Advances in computing systems

   (b) Developments of Machinery in general

   (c) Better Skills

   (d) Highly qualified programmers

9. Computing systems are taking the form of clouds means:

   (a) Computers have become smaller

   (b) Computing power will be disembodied.

   (c) Computers are kept in the open air.

   (d) Computing power will be performed by robots.

Q 10- 13 Read the passage below and answer the questions given after it.

Every enthusiastic gardener awaits the arrival of spring. The season not only affords an opportunity to enjoy various winter annuals in bloom but also to see and participate in the flower and garden shows. Such shows have tremendously contributed to the cause of horticulture. It is time for the experts too to familiarise themselves with any new species. Over the years, I have observed many an amateur transforming into a green thumb. Many lay gardeners have turned into experts, ll thanks to their constant quest for perfection and a desire to display something novel in their gardens. Out of a sense of competitiveness, participants in flower shows tab all flower and plant sources, both indigenous and exotic. These shows have thus become a platform to share and showcase horticultural experimentation and innovation. Like any other field of technology, horticulture has seen a sea change with the introduction of new species. Every year, we see an introduction of some new species. In the following year, many more variations of the same species become available.

10. Why do gardeners await eagerly the arrival of spring?

   (a) They want to sell flowers

   (b) They want to popularize their gardens

   (c) They long to see the natural blooming of flowers

   (d) They are desirous of participating in flower and garden shows.

11. How do some gardeners become experts?

    (a) They get training from some institute

    (b) They hire the services of some other experts

    (c) It is the result of their constant search for perfection

    (d) They succeed in hoodwinking others.

12. What is the main reason for the emergence of new species at flower shows?

    (a) The sense of competitiveness among the participants.

    (b) The result of a chance finding by a gardener

    (c) Visitors curiosity and interest in new things

    (d) Nature's bounteous creation of new things.

13. What is the main consequence when a new species is displayed at a show?

    (a) The producer gets a handsome award

    (b) All the participants congratulate the producer

    (c) Some jealous participants try to suppress the new species.

    (d) Many more variants in the same species become available in the following year.

Q14-15 The following five sentences come from a paragraph. The first and the last sentences are given. Choose the order in which the three sentences (P, Q, R) should appear to complete the paragraph.

14. S1. I passed the matriculation examination in 1887

  S2._____

  S3. _____

  S4. _____

  S5. This was my first journey from Rajkot to Ahmedabad and that too without a companion

P. The general poverty of the country naturally led Kathawad students to prefer the nearer and cheaper centre.

Q. If then used to be held at two centres, Ahmedabad and Bombay.

R. The poverty of my family likewise dictated to me the same choice.

(a) QPR
(b) PQR
(c) RPQ
(d) RQP

15. S1. The word 'mangrove' is derived from the Portuguese word for an individual mangrove tree, and from grove the English word for a group or stand of trees.

   S2._____

   S3. _____

   S4. _____

   S5. The combination and variety of adaptations found in this diverse and unique of plants no equal

   P. However, it isn't always exactly clear what constitutes a true mangrove.

   Q. Mangroves are a diverse group of predominantly tropical trees, shrubs, palms or ground ferns-tidal zone.

   R. Mangroves are trees, but their form is very versatile: they are found as low, scrubby plants in harsh conditions, whereas their canopies can attain heights over 40 metres under favourable conditions.

   (a) QPR
   (b) RPQ
   (c) PQR
   (d) RQP

Q 16-17. The following questions have the second sentence missing. Choose the appropriate sentence from the given options to complete it.

16.   (i) Little did Jainulabdeen and Ashiamma know that their son would grow up to be the first citizen of India.

     (ii)_____

     (iii) One amongst the most respected people of the country, Kalam contributed immensely both as a scientist and as a president.

     (a) He was responsible for numerous projects such as Project Devil and Project Valiant and launch of the Rohini-1, besides developing missiles under the missions Agni and Prithvi.

     (b) For the same, he was popularly tagged as the "Missile Man of India". Kalam was honored with great laurels and awards for his work by both the Government of India and other countries.

     (c) After completing his term as President, Kalam served as a visiting professor in various esteemed institutes and universities of India.

     (d) An Indian scientist and administrator, Kalam served as the 11th President of India from 2002 until 2007.

17.   (i) The small gold leafed Kyaiktiyo Pagoda, built atop the spherical boulder about 8cm across, is a revered Buddhist shrine in Myanmar, 200km northeast of the former capital Yangon.

     (ii) _____

     (iii) Yet it has for centuries stayed put, like any respectable rock.

     (a) Visitors marvel at how the boulders rests so precariously on that separate tabular rock.

     (b) Actually it is roughly pyramid shaped with a flat base if examined from far side.

     (c) But one legend has it that a strand of the Buddha's hairp laced beneath it 2500 years ago after the boulder was miraculously shipped there, lets it defy gravity.

Q 18-27. In the following passage there are some numbered blanks. Fill in the blanks by selecting the most appropriate word for each blank from the given option.

Read the following passage and answer the question that are given after it.

The 17 year _____(18) girl's right activist Malala Yousafzai has been _____(19) the Nobel Peace Prize ____(20) 2014. She ___(21) one of the two laureates to be declared winners this year. The other is Kailash Satyarthi, who _____(22) for Children's rights. Malala was given the accolade exactly two years and a day after a Taliban gunman shot her in the head on her school bus. Following her recovery _____ (23) a British hospital, Malala has toured the world speaking up for the rights for girls to receive ____(24) education. She once told reporters _____(25) going to school, 'is like walking ____(26) a magic door to your dreams'. Malala _____(27) the youngest ever recipient of the prize and the second Pakistani to scoop the award.

18. (a) old
    (b) young
    (c) tall
    (d) age

19. (a)gifted
    (b) given
    (c) receive
    (d) awarded

20. (a) with
    (b) by
    (c) for
    (d) on

21.(a) was
    (b) is
    (c) were
    (d) are

22.(a) campaigns

(b) supports

(c) discusses

(d) talks

23.(a) in

(b) on

(c) at

(d) with

24.(a) a

(b) an

(c) the

(d) with

25. (a) this

(b) that

(c) these

(d) there

26. (a) through
(b) across
(c) to
(d) in

27.(a) becomes

(b) became

(c) was

(d) is

Q28-35 Choose the word which best fills the blank from the four options given.

28. There is a _____ amount of fatty acids and carbohydrates in some of the imported chocolates.

   (a) Neglecting
   (b) Negligent
   (c) Negligible
   (d) neglected

29. The passenger car sales showed a decline _____ 7% to 5.6%.
   (a) from
   (b) for
   (c) of
   (d) to

30. His words were hardly _____ with that screaming and shouting in the market.
   (a) legible
   (b) eligible
   (c) intelligible
   (d) None of these

31. Look after your health _____ you should repent later on.
   (a) as
   (b) because
   (c) till
   (d) lest

32. Every year millions of tourists _____ the Anna Centenary Library in Chennai.

   (a) visiting
   (b) visit
   (c) are visiting
   (d) visited

33. Police _____the thief red-handed.

   (a) apprehended
   (b) comprehended
   (c) reprehended
   (d) secluded

34. The villagers ___ the death of their leader by keeping all the shops closed.

   (a) announced

   (b) protested
   (c) mourned
   (d) Consoled

35. These medicines are __ for curing cold.

      (a) Proper
      (b) Real
      (c) Effective
      (d) Capable
      (e) Powerful

Q36-38 Choose the appropriate phrasal verbs to complete the sentences.

36. I am sorry that I am late. I got ___ in traffic.
      a. lifted off
      b. held down
      c. caught up
      d. stuck up

37. I was so angry that I ___ in protest.
      a. gave up
      b. walked out
      c. ran over
      d. ran out

38. The man was _____ of jail early for good behaviour
   a. let out
   b. bent down
   c. sent down
   d. let off

Q39-41 Select the meaning of the given phrases/idioms

39. To leave someone in the lurch

   (a) To come to compromise with someone

   (b) Constant source of annoyance to someone

   (c) To put someone at ease

   (d) To desert someone in his difficulties

40. To play second fiddle

   (a) To be happy, cheerful and healthy

   (b) To reduce importance of one's senior

   (c) To support the role and view of another person

   (d) To do back seat driving

41. To smell a rat

      (a) To see signs of plague epidemic

      (b) To get bad small of a bad dead rat

      (c) To suspect foul dealings

      (d) To be in a bad mood

Q42-43 Select the word which mean the opposite of the given word.

42. Happy
      a. Blithe
      b. Dismal
      c. Content
      d. Delighted

43. Permanent

         a.fix

         b. momentary

         c. changeless

         d. long lasting

Q44-48. Select the most appropriate option to fill in the blanks from the given alternatives.

44. Some animals have unique ____ that allow them to survive in extreme weather conditions.

(a) characteristics
(b) problems
(c) feelings
(d) conditions

45. ____ weight gain or weight loss is not good for you body.

(a) Explosive
(b) Expressive
(c) Extensive
(d) Excessive

46. There was an ____ response for the marathon.

(a) overwhelming
(b) overriding
(c) excessive
(d) extreme

47. The sparrows took no ____ the bread.

(a) notice of
(b) notice about
(c) notice from
(d) notice to

48. He shows great ability ____ Mathematics.

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

Q49-50. In questions given below, choose the one which can be substituted for the given word/sentence.

49. That which cannot be corrected

   a.   Unintelligible   b.   Indelible

   c.   Illegible   d.   Incorrigible

50. Something that can be heard

   a.   Auditory   b.   Audio-visual

   c.   Audible   d.   Audition

SCHOLASTIC ABILITIY TEST

Science

Choose the correct answer:

1. The type of energy observed in Hydel Power Station is
   (a) Kinetic energy only
   (b) Potential energy only
   (c) Mechanical energy only
   (d) (d) None of the above

2. Which of the following is not a vector quantity?
   (a) Force
   (b) Weight
   (c) Pressure
   (d) Speed

3. 23:00 hours means:
   (a) 1 a.m.
   (b) 11:00 a.m.
   (c) 11:00 p.m.
   (d) 9:00 p.m.

4. To measure short intervals of time, we use
   (a) Stopwatch
   (b) Pendulum clock
   (c) Wrist watch
   (d) Speedometer

5. According to the Right Hand Thumb rule of electromagnetism, the thumb shows the
   (a) Direction of magnetic lines of force only
   (b) Direction of current only
   (c) Direction of conductor only
   (d) Direction of screw only

6. An instrument that measures the electric current is known as

    (a) Rheostat

    (b) filament

    (c) ammeter

    (d) voltmeter

7. A permanent bar magnet can be obtained by magnetizing a bar of

    (a) Steel

    (b) Copper

    (c) Iron

    (d) Nickel

8. S.I. unit of charge is

    (a) Ampere

    (b) Ohm

    (c) Coulomb

    (d) Lumen

9. A current carrying coil behaves as

    (a) Circuit

    (b) Magnet

    (c) Electric current

    (d) Electrode

10. A prism is a piece of transparent material bounded by

    (a) 2 plane surfaces

    (b) 3 plane surfaces

    (c) many plane surfaces

    (d) 3 curved surfaces

11. A pencil appears to be bent when placed in a glass of water due to

    (a) Reflection

    (b) Refraction

    (c) Dispersion

    (d) Both (i) & (ii)

12. The phenomena of splitting of light into its constituent colours is known as

    (a) Reflection

    (b) Refraction

    (c) Dispersion

    (d) None of these

13. In an astronomical telescope, the number of lenses used is
    (a) 1
    (b) 2
    (c) 3
    (d) 4

14. Out of the following, which of the frequency is not clearly audible to human ear?
    (a) 30 Hz
    (b) 30,000 Hz
    (c) 300 Hz
    (d) 3000 Hz

15. In which of the following equations is the number of Calcium atoms balanced?
    (a) $CaCO_3 + H_3Po_4 \longrightarrow Ca (Po4)_2 + H_2O + CO_2$
    (b) $2CaCo_3 + H_3Po4 \longrightarrow Ca_3(P04)_2 + H_20 + CO_2$
    (c) $3CaCO_3 + H_3PO_4 \longrightarrow Ca_3(PO4)_2 + H_2O + CO_2$
    (d) $4CaCO3 + H3Po4 \longrightarrow Ca3(PO_4)_2 + H_2O + CO_2$

16. Which of the following is not an exothermic reaction?
    (a) Burning or combustion of natural gas
    (b) Respiration
    (c) Rotting of vegetable matter
    (d) Reaction of Barium hydroxide and ammonium chloride

17. Soda –acid fire extinguisher is produced by the reaction of a metal hydropen carbonate with an acid which is
    (a) Hcl
    (b) H_2CO_3
    (c) H_2SO_4
    (d) CH_3COOH

18. The PH of Acid rain solution is
    (a) 3.0 -4.0
    (b) 5.0 – 6.0
    (c) 4.0 – 5.0
    (d) 2.0 – 3.0

19. Which of the following statement is true?

   (a) Boric acid is a tribasic acid

   (b) A Solution of sodium carbonate is acidic

   (c) A solution of iron (III) chloride is basic

   (d) The compound K_4 [Fe(CN)$_6$] is a complex salt

20. Which of the following does not form an acid salt?

   (a) Sulphurous acid

   (b) Carbonic Acid

   (c) Sulphuric Acid

   (d) Hydrochloric Acid

21. The example of a metal which can be easily cut with a knife is

   (a) Mercury

   (b) Silver

   (c) sodium

   (d) Lead

22. A Substance which reacts with gangue to form a fusible material is

   (a) Slag

   (b) Flux

   (c) Ore

   (d) Catalyst

23. Soaps prepared by the alkaline hydrolysis of

   (a) Glycerides

   (b) Esters

   (c) Carboxylic acids

   (d) None of these

24. Give the IUPAC name of the following compound

   $$CH_3\text{-}C\text{-}CH\text{-}CH_3$$
   $$\overset{||}{O} \quad \overset{|}{CH_3}$$

   (a) 3-methylbutan-1-one

   (b) 3-methylbutan-2-one

   (c) but -2-en-2-one

   (d) 1,2-ethanediol

25. Synthetic detergents are obtained from coal tar and

   (a) Soaps

   (b) Petroleum

   (c) Sodium Salts

   (d) Water

26. The acidity of soil, which is due to excessive use of fertilizer ammonium sulphate can be neutralized by adding

 (a) Lime

 (b) Caustic Soda

 (c) Washing Soda

 (d) None of these

27. Which of the following is not part of large intestine?

 (a) Caecum

 (b) Colon

 (c) Rectum

 (d) Jejunum

28. Gaseous exchange in insects occur through

 (a) Tracheae

 (b) Gills

 (c) Skin

 (d) Lungs

29. The path of circulation of blood is

 (a) Heart $\longrightarrow$ Arteries $\longrightarrow$ Capillaries $\longrightarrow$ Veins $\longrightarrow$ Heart

 (b) Heart $\longrightarrow$ Veins $\longrightarrow$ Arteries $\longrightarrow$ Capillaries $\longrightarrow$ Heart

 (c) Heart $\longrightarrow$ Capillaries $\longrightarrow$ Arteries $\longrightarrow$ Veins $\longrightarrow$ Heart

 (d) Heart $\longrightarrow$ Veins $\longrightarrow$ Capillaries $\longrightarrow$ Arteries $\longrightarrow$ Heart

30. What Part of the flower produces pollen grains?

 (a) Filament

 (b) Ovary

 (c) Anther

 (d) Stigma

31. The level of the food chain which contains the most energy are the

 (a) Decomposers

 (b) Herbivores

 (c) Omnivores

 (d) Producers

32. All of the following are ozone depending substances (ODS) except

 (a) Chlorofluorocarbon (CFCs)

 (b) Methane (CH$_4$)

 (c) Nitrous Oxides (H$_2$O$_5$)

 (d) Sodium Hydroxide (NaOH)

33. Chlorophyll is present in which of the following organisms.

   (a) Protozoa.

   (b) Bacteria

   (c) Fungi

   (d) Algae

34. Vegetative Propagation in potato is by

   (a) Rhizome

   (b) Tuber

   (c) Bulb

   (d) Corn

35. A unit in heritance forming part of a chromosomes is

   (a) Chromosomes

   (b) Gene

   (c) Gametes

   (d) Alleles

36. How many pairs of chromosomes are there in human being?

   (a) 21 pairs of chromosomes

   (b) 22 pairs of chromosomes

   (c) 23 pairs of chromosomes

   (d) 24 pairs of chromosomes

37. Insulin is secreted by

   (a) Adrenal Gland

   (b) thyroid Gland

   (c) Pancreas

   (d) Ovaries

38. All of the following are plants hormones except

   (a) Gibberellins

   (b) Oxytocin

   (c) Ethylene

   (d) Cytokinins

SOCIAL STUDIES

1. The earliest recorded Newspaper was the
   (a) Macta Diurna
   (b) Macta Carta
   (c) Acta Miurna
   (d) Acta Diurna

2. The oldest known printed book in the world is
   (a) The bible
   (b) The Vedas
   (c) The diamond sutra
   (d) The Tripitikas

3. Marco polo was an
   (a) Italian Traveller
   (b) Spanish Merchant
   (c) British Transeler
   (d) French Traveller

4. Who introduced the printing press in India
   (a) The British East India Company
   (b) The Portuguese
   (c) The Parsis
   (d) The French

5. When the residential area shifts outwards, it is called
   (a) Urbanization
   (b) Deurbanization
   (c) Traditional Urbanization
   (d) Industrial Urbanization

6. Urbanization can take place along
   (a) a line
   (b) Two lines
   (c) Three Lines
   (d) Four Lines.

7. The Industrial Revolution started in
   (a) The USA
   (b) Spain
   (c) France
   (d) England

8. What is proto-industralization
   (a) Large scale industrial production in factories
   (b) Large scale industrial not in factories
   (c) Small scale industrial production in factories
   (d) Small Scale industrial production not in factories.

9. When did the Jallianwala Bagh Massacre happen
   (a) 10th April, 1919
   (b) 11th April,1919
   (c) 12th April, 1919
   (d) 13th April,1919

10. The principles of Liberty, Equality and Fraternity was derived from
    (a) the French Revolution
    (b) The American Revolution
    (c) The Spanish Revolution
    (d) The African Revolution

11. The first Indian club, the Calcutta Cricket Club was established in
    (a) 1890
    (b) 1992
    (c) 1792
    (d) 1900

12. The aim of Resource planning towards sustainable development is through:
    (a) Planning for exploitation of resources.
    (b) Preparation of inventory of resources
    (c) Evaluation in terms of availability for development
    (d) All of the above.

13. Land degradation in India is about _____
    (a) 110
    (b) 120
    (c) 130
    (d) 140

14. The two states which is referred to as Wheat Basket of India.
    (a) Uttar Pradesh and Madhya Pradesh
    (b) Punjab and Haryana
    (c) Haryana and Rajashthan
    (d) Gujarat and Punjab

15. _____ is the finest iron-ore with 70% of iron:
    (a) Magnetite
    (b) Granite
    (c) Bauxite
    (d) Mica

16. The main objectives of Technology Mission on cotton launched on 21st February 2000 is:
    (a) Raising the cost of production
    (b) Reducing the cost of production
    (c) To energies and sustain growth
    (d) Only (a) and (b)

17. The Aurangzeb Road in New Delhi is being renamed as:
    (a) Sher- Shah Suri Marg.
    (b) AP.P.J. Abdul Kalam
    (c) Aurobindo Marg.
    (d) Ashoka Road.

18. The Airport Authority of India was formed on:
    (a) 1st April, 1992
    (b) 1st April, 1993
    (c) 1st April,1994
    (d) 1st April, 1995

19. Which of the following statement is true about the state of
    Meghalaya

    (a) The total land area is 22,498 sq.kms

    (b) Has no railway line

    (c) Is famous for its horticulture

    (d) Has a tropical type of climate.

20. The Nangbah – Shangpung belt of Jaintia Hills is concentrated with
    the cultivation of:

    (a) Ginger

    (b) Turmeric
    (c) Black Pepper
    (d) Chilli

21. The Giant Kew and the Queen Variety are the prominent variety of
    _____ grown in the state:

    (a) Litchi

    (b) Guava

    (c) Pineapple

    (d) Jackfruit

22. What is the full form of KCC, a scheme introduced by the Governor of
    India for the benefit of the farmers?

    (a) Kissan Capital Card

    (b) Kissan Credit Card

    (c) Krishak Credit Cart

    (d) Krishak Capital Card

23. A person who does not discriminate others on the basis of religious
    beliefs.
    (a) Communist

    (b) Feminist

    (c) Secularist

    (d) Casteist

24. The Union List consists of how many subjects?
    (a) 97

    (b) 87

    (c) 77

    (d) 67

25. Under whose leadership were the anti-caste movements launched during the 19th Century?

(a) Jyotirao Phule and Gandhiji

(b) Baba Sahib Ambedkar and Bhagat Singh

(c) Jyotirao Phule and Baba Sahib Ambedkar

(d) None of the above.

26. What percentage of the Indian Population constitutes the Below Poverty Line (BPL)?

(a) Nearly 40%

(b) Nearly 45%

(c) Nearly 50%

(d) Nearly 60%

27. Which of the following Indian Institution's promotes research in educational planning and administration?
(a) Central Advisory Board of Education (CABE)

(b) National University of Educational Planning and Administration

(NUEPA)

(c) Sarva Shiksha Abhiyan (SSA)

(d) None of the above

28. In which year the Government of India announced the National Policy for Older Persons?
(a) 1997

(b) 1998

(c) 1999

(d) 2000

29. Who is an active and participatory citizen in a Democracy?
(a) Aware of his/her rights

(b) Willing to perform a citizen's duties

(c) Maintains law and order

(d) All the above

30. In which year Saddam Hussain was hanged to death?
    (a) 2004

    (b) 2005

    (c) 2006

    (d) 2007

31. What do we call to a group of organizations that mobilize people to win political power groups?
    (a) Movements

    (b) Political Parties

    (c) Public Interest

    (d) Pressure Groups

32. Who founded the Bahujan Samaj Party (BSP)?
    (a) Lalu Prasad Yadav
    (b) Jayalaitha
    (c) Murli Manohar Joshi
    (d) Kanshi Ram

33. Pre-Capita income is the :-
    (a) total Income of the Country

    (b) the Net National Income

    (c) Average Income of a person in a country

    (d) None of the above

34. Human Development Index indicate:-
    (a) Level of development of a country or state

    (b) Level of knowledge of people

    (c) Literacy rate

    (d) Urbanization

35. The state which ranks first in Human Development (HDI) is
    (a) Punjab

    (b) Maharashtra

    (c) Kerela

    (d) New Delhi

36. Forestry falls under the

(a) Primary Sector

(b) Secondary Sector

(c) Tertiary Sector

(d) None of the above.

37. The North Eastern regions contribution to the national economy is

(a) About 1 percent

(b) About 2 percent

(c) About 3 percent

(d) About 4 percent

MATHEMATICS

1. For some integers q, every odd integers is of the form
   (a) q
   (b) q+1
   (c) 2q
   (d) 2q+1

2. If two positive integers p and q are written as $p=x^3y^2$ and $q = xy^3$, x, y are prime numbers, then HCF (p,q) is
   (a) xy
   (b) xy^2
   (c) x^3y^3
   (d) x^2y^2

3. If one of the zeroes of the polynomial $(k-1)x^2 + kx+1$ is -3 then the value of k is
   (a) $\dfrac{4}{3}$
   (b) $\dfrac{-4}{3}$
   (c) $\dfrac{2}{3}$
   (d) $\dfrac{-2}{3}$

4. The pair of equations x+2y + 5 = 0 and -3x-6y+1=0 have
   (a) A unique solutions
   (b) Exactly two solutions
   (c) Infinity many solutions
   (d) No solutions.

5. Which of the following is not a quadratic equation?
   (a) $(x+2)^2 = 2(x+3)$
   (b) $x^2+3x =(-1)(1-3x)^2$
   (c) $(x+2) (x-1) = x^2-2x -3$
   (d) $x^3 - x^2+2x+1 =(x+1)^3$

6. Which of the following equations has no real roots?

(a) $x^2-4x-3\sqrt{2} = 0$

(b) $x^2-4x+3\sqrt{2} = 0$

(c) $x^2+4x-3\sqrt{2} =$

(d) $3x^2+4\sqrt{3}x+4 = 0$

7. The pair of equations x=a and y=b graphically represents lines which are

(a) Parallel

(b) Intersecting at (b,a)

(c) Coincident

(d) Intersecting at (a ,b)

8. The first four terms of an AP, whose first term is -2 and the common difference is -2, are

(a) -2 , 0, 2, 4

(b) -2, 4, -6, 8

(c) -2, -4, -6, -8

(d) -2, -4, -8, -16

9. Which term of the AP : 21, 42, 63, 84, ... is 210?

(a) 10th

(b) 12th

(c) 15th

(d) 19th

10. In an AP, if a=1 9n = 20 and Sn =399 then n is

(a) 19

(b) 21

(c) 38

(d) 42

11. The lengths of the diagonals of a rhombus are 16cm and 12 cm. them, the length of the side of the rhombus is

(a) 14cm

(b) 10cm

(c) 9cm

(d) 8cm

12. The hypotenuse of a right triangle is 25cm and out of the remaining two sides, one is longer than the other by 5cm. the length of the longer side is

(a) 10cm

(b) 15 cm

(c) 18cm

(d) 20 cm

13. The corresponding sides of two similar triangles are in the ration 2:3. if the area of the smaller triangle is 48cms, then the area of the longer triangle is.

(a) 108cm^2

(b) 96cm^2

(c) 72 cm^2

(d) 64cm^2

14. The Perimeter of a triangle with vertices (0,4) (0,0) and (3,0) is

(a) 5

(b) 11

(c) 12

(d) 7+$\sqrt{5}$

15. The distance between the points (0,5) and (-5,0) is

(a) 5

(b) 5$\sqrt{2}$

(c) 10

(d) 2$\sqrt{5}$

16. A pole 6m high casts a shadow 2√3 long on the ground, then the sun's elevation is

(a) 90°
(b) 60°

(c) 45°

(d) 30°

17. If radii of two concentric circles are 4cm and 5cm, then the length of each chord of one circle which is tangent to the other circles is

(a) 9cm
(b) 3cm

(c) 6cm

(d) 1cm

18. If the area of a circle is 154cm², then its circumference is

(a) 66cm
(b) 55cm

(c) 44cm

(d) 22cm

19. during conversion of a solid from one shape to another, the volume of the new shape
(a) Increases

(b) May increase or decrease

(c) Decreases

(d) Remains unaltered.

20. Which of the following can be probability of an event?
(a) -0.04

(b) 1.004

(c) $\dfrac{18}{3}$

(d) $\dfrac{8}{7}$

21. The value of x that satisfies the equation $\dfrac{4}{x-3} + \dfrac{5}{x-5} = \dfrac{9}{x-3}$ is

(a) 4

(b) 3

(c) 2

(d) 1

22. If one root of the $x^2-x-k=0$ be the square of other than k is equal to

   (a) $2\pm\sqrt{3}$

   (b) $3\pm\sqrt{2}$

   (c) $2\pm\sqrt{5}$

   (d) $5\pm\sqrt{2}$

23. Let the surface area of a globe be 2464 sq.cm. the redius of the globe is

   (a) 14cm

   (b) 411cm

   (c) $\sqrt{2464}$ cm

   (d) 1232cm

24. The class mark of the class 90-120 is

   (a) 90

   (b) 105

   (c) 11

   (d) 120

25. In $\triangle$LMN, $\triangle$L =60, LM=50. If $\angle$LMN~$\triangle$PQR, then value of $\angle$R is

   (a) 40°

   (b) 60°

   (c) 70°

   (d) 110°

DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING
MEGHALAYA, SHILLONG
NATIONAL TALENT SEARCH (STATE LEVEL 2015-16)
MENTAL ABILITY TEST
KEY ANSWER

	Mental Ability Test				
Q. No	**Alternatives**	**Q. No**	**Alternatives**	**Q. No**	**Alternatives**
1	A	21	A	41	D
2	C	22	B	42	C
3	A	23	C	43	C
4	B	24	B	44	C
5	D	25	B	45	A
6	A	26	C	46	D
7	E	27	A	47	E
8	A	28	A	48	C
9	C	29	B	49	E
10	E	30	C	50	D
11	C	31	C		
12	B	32	C		
13	E	33	D		
14	E	34	A		
15	C	35	D		
16	C	36	D		
17	C	37	C		
18	A	38	B		
19	B	39	A		
20	B	40	C		

	Language Comprehensive Test				
Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	C	17	A	33	A
2	B	18	A	34	A
3	D	19	D	35	C
4	A	20	C	36	C
5	D	21	A	37	C
6	A	22	A	38	B
7	B	23	A	39	A
8	A	24	B	40	D
9	B	25	B	41	C
10	D	26	A	42	B
11	C	27	A	43	B
12	A	28	C	44	A
13	D	29	A	45	D
14	A	30	C	46	A
15	A	31	D	47	A
16	D	32	B	48	D
				49	D
				50	C

Signature of Examiner _____

KEY ANSWER

Science		Social Science		Mathematics	
Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	C	1	D	1	D
2	D	2	B	2	B
3	C	3	A	3	A
4	A	4	B	4	D
5	B	5	B	5	C
6	C	6	C	6	B
7	A	7	D	7	D
8	C	8	B	8	C
9	B	9	D	9	A
10	B	10	A	10	C
11	B	11	D	11	B
12	C	12	C	12	D
13	B	13	B	13	A
14	B	14	A	14	C
15	C	15	D	15	B
16	D	16	B	16	B
17	B	17	D	17	C
18	B	18	C	18	C
19	D	19	B	19	D
20	B	20	C	20	C
21	B	21	B	21	D
22	B	22	C	22	C
23	A	23	A	23	A
24	B	24	C	24	B
25	C	25	A	25	C
26	A	26	B		
27	D	27	C		
28	A	28	D		
29	A	29	C		
30	C	30	B		
31	D	31	D		
32	D	32	C		
33	D	33	C		
34	B	34	A		
35	B	35	C		
36	C	36	A		
37	C	37	B		
38	B				

Signature of Examiner _____

Class X Code	State Code	Year	Centre Code	Serial No.
2	1 4	1 6		

**DIRECTORATE OF EDUCATIONAL RESEARCH & TRAINING;
MEGHALAYA: SHILLONG**

NATIONAL TALENT SEARCH (STATE LEVEL) EXAMINATION 2016-17.

Part I (a) Mental Ability Test   **- 45 minutes**   **Maximum Marks -50**
    (b) Language Comprehensive Test   **-45 minutes**   **Maximum Marks -40**
Part II   Scholastic Aptitude Test   **-90 minutes**   **Maximum Marks-90**

INSTRUCTIONS TO CANDIDATES
**Read the following instructions carefully before answering the questions. Answers are
to be written in the supply ANSWER SHEET.**

1. Please write your Centre Code no. and Serial No. very clearly (only one digit in one block) as given in your Admit Card.
2. Please note that no block is left unfilled and even zeroes appearing in the Centre Code no. and Serial no. Each digit are to be correctly transferred to the appropriate block on both **QUESTION BOOKLET** and the **ANSWER SHEET**. For all subsequent purposes your Centre Code no. and Serial no. shall remain the same even when you are allowed a change of centre.
3. Avoid over writing the numbers/ digits for both Centre Code and Serial No.
4. The Question Booklet and Answer Sheet are consisting of Two Parts. Each Part consists 90 questions.
5. All Questions carry one mark each.
6. All Questions are Compulsory.
7. Begin with the first question and keep trying one question after another till you finish both the parts.
8. Since the time allotted to the two parts of these question booklets is very limited, you should make the best of it by not spending time on any one question.

9. Separate pages for Rough Work are provided at the last page of your question booklet.

10. The answer sheet has two parts. Part I and Part II corresponding to Part I and Part II of the Question Booklet. In part II, answers to a subject are to be given under the column where the name of the subject is given.

11. Answer to each question is to be indicated by encircling around alternative 1 or 2 or 3 or 4 or 5 **OR** a or b or c or d or e from amongst the ones given for the corresponding questions in the question Booklet, e.g.., if you think that alternative 1 is correct then encircle as example given below.

①

12. Now turn to the next page and start answering the questions.

N.B. Do not write anything except Serial No. and rough work anywhere in this Booklet

Mental Ability Test

Direction (Q Nos: 1- 5)- Given below are based on letter series in which some letters are missing. The missing letters are given in a proper sequence as one of the alternatives under each question. Choose the correct alternates.

1. ab-acc--da-bba-

    A. cdabc

    B. badaa

    C. cdbcd

    D. dbacd

2. abb--ab-b-bba-a

    A. bbbab

    B. babba

    C. abaab

    D. bbabb

3. –CP-D-P-DC-1

    A. DCIPD

    B. ICCIP

    C. PCICD

    D. DICIP

4. b-a-bab-ab-a

    A. baba

    B. babb

    C. abab

    D. abba

5. –acca-ccca-acccc-aaa

   A. acca

   B. caaa

   C. ccaa

   D. caac

Direction (Q. Nos 6-15): In each of the following questions, underline the two words which are of the same kind

6.
 A. dog
 B. fish
 C. cat
 D. bird
 E. roses

7.
 A. pen
 B. vegetables
 C. pencil
 D. radio
 E. book

8.
 A. orchids
 B. chair
 C. daisies
 D. car
 E. plates

9.
 A. Solomon
 B. ruler
 C. Peter
 D. cup
 E. shoes

10.
 A. Fly
 B. Bear
 C. Penguin
 D. Sole
 E. canary

11.

A. sycamore

B. show

C. beech

D. steak

E. cod

12.

A. snow

B. oak

C. word

D. author

E. frost

13.

A. writer

B. monday

C. author

D. glass

E. paint

14.

A. bicycle

B. scissor

C. scooter

D. sheep

E. cups

15.

A. Meghalaya

B. Gujarat

C. Nagaland

D. Bihar

E. Kerala

16. CUP : LIP : BIRD : ?

    A. BUSH

    B. GRASS

    C. FOREST

    D. BEAK

17. FLOW : RIVER : STAGNANT : ?

    A. RAIN

    B. STREAM

    C. POOL

    D. CANAL

18. PAW : CAT : HOOF : ?

    A. LAMB

    B. ELEPHANT

    C. LION

    D. HORSE

19. ORNITHOLOGIST : BIRD : ARCHEALOGIST : ?

    A. ISLANDS

    B. MEDIATORS

    C. ARCHEOLOGY

    D. AQUATIC

20. PEACOCK : INDIA : : BEAR : ?

    A. AUSTRALIA

    B. AMERICA

    C. RUSSIA

    D. ENGLAND

Directions (Q. Nos 21 – 25): In the following you are to select the correct answer based on the statements in the given questions:

21. In a certain code FIRE is coded as DGPC. What will be the last letter of the coded word for SHOT.

    A. Q

    B. R

    C. S

    D. P

22. If D = 4 , and Cover = 63, then BASIS = ?

    A. 49

    B. 50

    C. 54

    D. 55

23. If in a certain language PROSE is coded as PPOQE, how is LIGHT coded in that code?

    A. LIGFT

    B. LGGHT

    C. LGGFT

    D. LLGFE

24. If SUMMER Code is RUNNER, the code WINTER is

    A. SUITER

    B. VIOUER

    C. WALKER

    D. SUFFER

25. If MIND becomes KGLB and ARGUE becomes YPESC, then what will DIAGRAM be in that code.

    A. BGYEPYK

    B. BGYPYEK

    C. GLPEYKB

    D. LKBGYPK

26.

A	D	G
D	I	N
I	P	?

A. V
B. X
C. W
D. Y

27.

7	4	5
8	7	6
3	3	?
29	19	31

A. 3
B. 4
C. 5
D. 6

28.
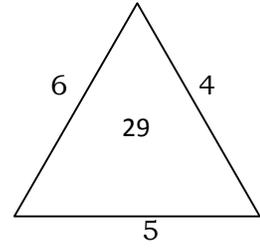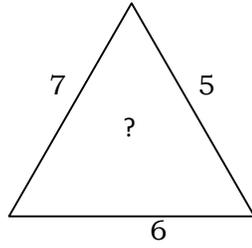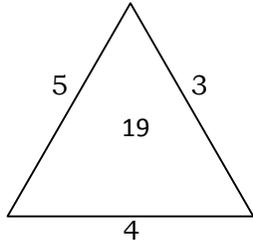
A. 25
B. 37
C. 41
D. 47

29.
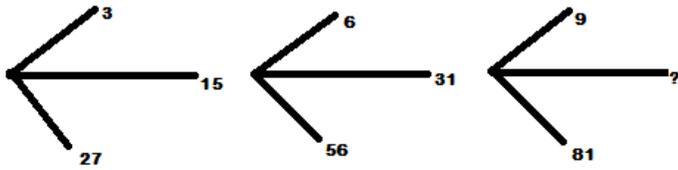
A. 45
B. 41
C. 32
D. 40

30.
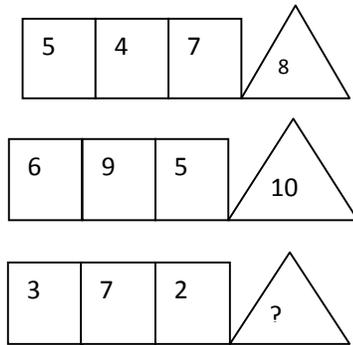
A. 1
B. 4
C. 3
D. 6

Directions (Q. Nos. 31-35): To each of the following questions four probable answers have been given. Select the most appropriate alternatives as the answer.

31. While travelling in a bus, you, found the one passenger was pulling the alarm chain of the bus, what would you do-

A. Help the passenger
B. Ignore the passenger
C. Inform the bus conductor
D. Let them pull the chain

32. While going on a scooter, you find someone has been hurt by your scooter, you would.

A. Try to run away
B. Stop your scooter
C. Take him, to a doctor and arrange for his medical aid
D. Pay compensation

33. Your maid has invited you to her daughter's wedding, you would-

A. Completely ignore her
B. Attend the wedding
C. Buy a gift for her daughter and help in the wedding
D. Congratulate her and make excuse for not attending the wedding.

34. You are alone in the house suddenly your sister was experiencing a bad stomach ache. You would

   A. Get upset
   B. Go out of the house
   C. Take her to a nearest hospital
   D. Call an ambulance for emergency

35. Your friend accidently spills soft drinks on you in a party. You

   A. Spoil his/dress too
   B. Snub him/her
   C. Say it is ok
   D. Just laugh it off

Directions (Q. Nos. 36-40): study the following questions properly and answer them out of the alternatives.

36. In a row of trees, a tree is 7th from the left and 14th from the right end. How many trees are there in the row

   A. 18
   B. 19
   C. 20
   D. 21

37. B is twice as old as A but twice younger than F. C is half the age of A but is twice older than D. Who is the second oldest?

   A. B
   B. F
   C. C
   D. D

38. Ramesh ranks 13th in the class of 33 students. There are 5 students below Suresh rank wise. How many students are there between Ramesh and Suresh ?

   A. 12
   B. 14
   C. 15
   D. 16

9

39. How many such pairs of letters are there in the word SENDING, each of which has as many letters between its two letters as there are between them in the English alphabets.

   A. No such letters
   B. One
   C. Two
   D. Three

40. A parking lot contains 160 vehicles. Each vehicle is either a car or a truck and each vehicle is either red or green. 70 vehicles are red and 120 vehicles are cars. If there are 18 green trucks, how many red cars are there.
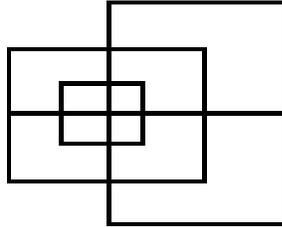
   A. 54
   B. 50
   C. 48
   D. 45

Directions (Q.Nos. 41-45) : In the following questions, find the number of figures given below:

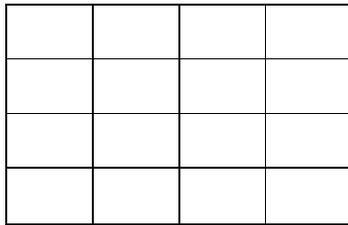41. Find the number of triangles in the given figure
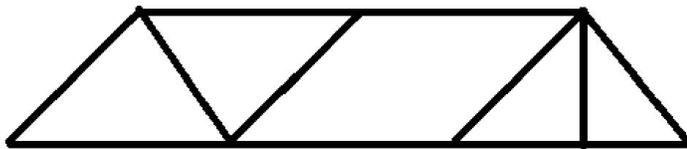
   A. 8
   B. 10
   C. 12
   D. 14

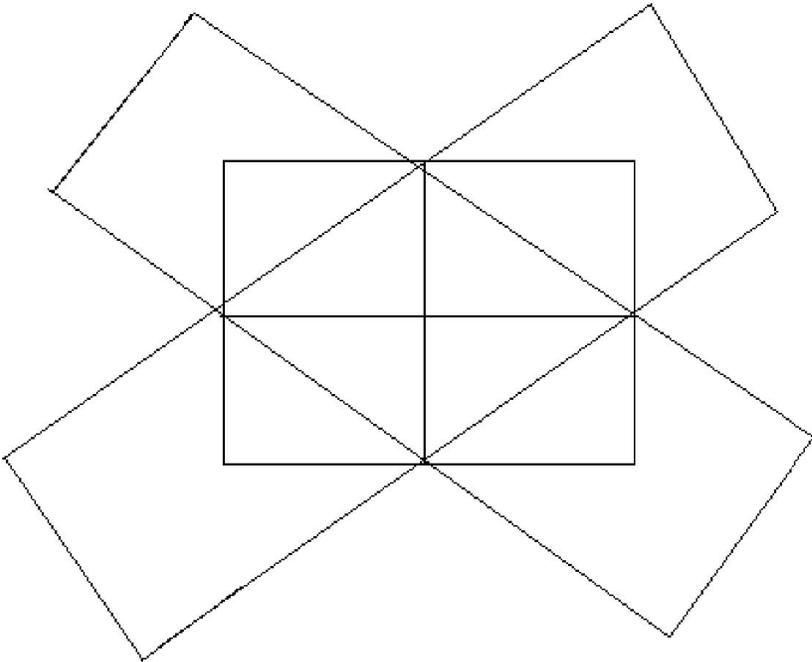42. Find the maximum number of straight lines required to make the given figure.

A. 13
B. 15
C. 17
D. 19

43. Count the number of squares in the given figure

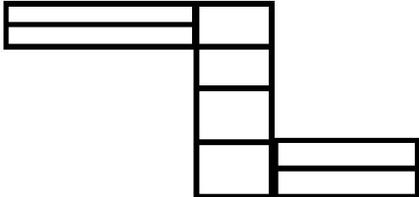A. 32
B. 30
C. 29
D. 28

44. Count the number of rectangles in the given figure

A. 20
B. 18
C. 16
D. 15

45. Count the number of rectangles in the figure
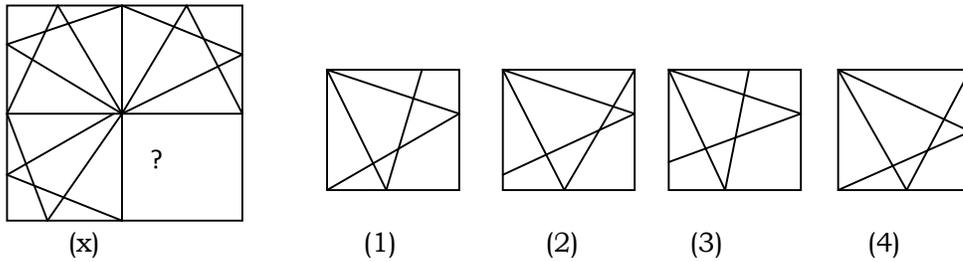

A. 8
B. 17
C. 18
D. 20

Direction (Q. Nos. 46-50) : Out of the figure (1) (2) (3) (4) and (5), given in each problem, four are familiar in certain way. However, one figure is not like the other four
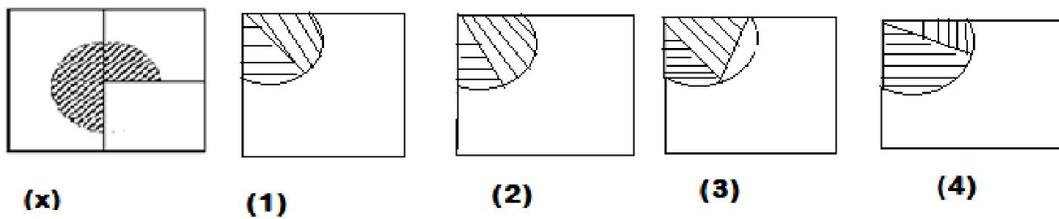
46.

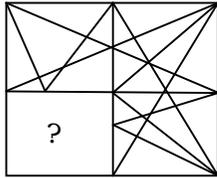1. Identify the figure that completes the pattern

| (x) | (1) | (2) | (3) | (4) |

A. 1
B. 2
C. 3
D. 4

47.

1. Identify the figures that completes the pattern.

| (x) | (1) | (2) | (3) | (4) |

A. 1
B. 2
C. 3
D. 4

48.

1. Identify the figure that completes the pattern

(x)   (1)   (2)   (3)   (4)

A. 1

B. 2

C. 3

D. 4

49.

1. Identify the figure that completes the pattern
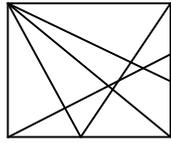

(x)   (1)   (2)   (3)   (4)
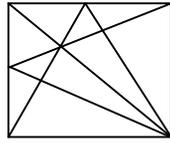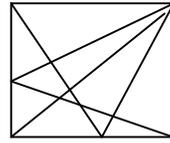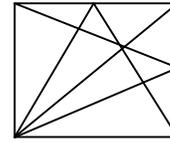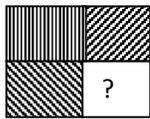
A. 1

B. 2

C. 3

D. 4

50.

1. Identify the figure that completes the pattern

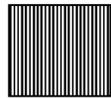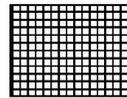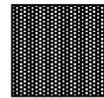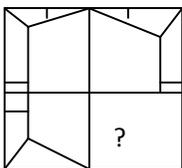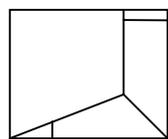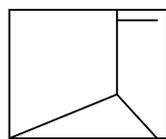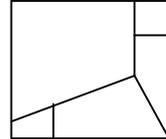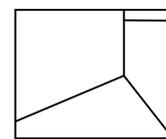(x)   (1)   (2)   (3)   (4)

A. 1

B. 2

C. 3

D. 4

LANGUAGE COMPREHENSIVE TEST

Q1-5 Read the passage below and answer the questions given after it.

Speech is great blessings but it can also be great curse, for while it helps us to make our intentions and desires known to our fellows, it can also if we use it carelessly, make our attitude completely misunderstood. A slip of the tongue, the use of unusual word, or of an ambiguous word, and so on, may create an enemy where we had hoped to win a friend. Again, different classes of people use different vocabularies, and the ordinary speech of an educated may strike an uneducated listener as pompous. Unwittingly, we may use a word which bears a different meaning to our listener from what it does to men of our own class. Thus speech is not a gift to use lightly without thought, but one which demands careful handling. Only a fool will express himself alike to all kinds and conditions to men.

1. The best way to win a friend is to avoid

    A.   irony in speech

    B.   pomposity in speech

    C.   verbosity in speech

    D.   ambiguity in speech

2. While talking to an uneducated person, we should use

    A.   ordinary speech

    B.   his vocabulary

    C.   simple words

    D.   polite language

3. If one used the same style of language with everyone, one would sound

    A.   flat

    B.   boring

    C.   foolish

    D.   democratic

4. A 'slip of the tongue' means something said

   A.   wrongly by choice

   B.   unintentionally

   C.   without giving proper thought

   D.   to hurt another person

5. Speech can be curse, because it can

A. hurt others

B. lead to carelessness

C. create misunderstanding

D. reveal our intentions

Q6-10 Read the passage below and answer the questions given after it.

The instinctive, natural way to express anger is to respond aggressively. Anger is a natural, adaptive response to threats, it inspires powerful, often aggressive, feelings and behaviours , which allow us to fight and to defend ourselves when we are attacked. On the other hand, we can't physically lash out at every person or object that irritates or annoys us, laws, social norms and common sense place limits on how far our anger can take us. People use a variety of both conscious and unconscious processes to deal with their angry feelings. The three main approaches are expressing, suppressing and calming. Expressing your angry feelings is an assertive- not aggressive-manner is the healthiest way to express anger. Being assertive doesn't mean being pushy or demanding, it means being respectful of yourself and others. Anger can suppressed, and then converted or redirected. This happens when we hold in your anger, stop thinking about it, and focus on something positive.

6. How, according to the author, can one suppress anger?

A. by holding one's anger

B. by converting anger

C. by thinking about one's anger

D. by redirecting anger.

7. Which one of the following places limits in how far we can take our anger?

A. feelings

B. law

C. instinct

D. behaviour

8. What does the author mean by being assertive?

    A. being pushy

    B. being demanding

    C. being respectful

    D. being calm

9. How does a person naturally express anger?

    A. by defending oneself
    B. by inspiring powerful feelings

    C. by responding aggressively

    D. by adapting strong behaviour

10. According to the author, how should people deal with their anger?

    A. expressing unconsciously

    B. express it aggressively

    C. expressing consciously

    D. express it assertively.

Q11- 15 Read the passage below and answer the questions given after it.

Chameleons can make their skin change, but not because they decide to. The colour changes to help the chameleon avoid its enemies. It is a form of camouflage, a disguise that lets it blend with its surroundings. The change is actually determined by environmental factors, such as light and temperature.

Bright sunlight causes the skin to darken. On cool nights, the colour fades to a creamy colour. The colour also changes when chameleons are excited, angry or afraid. The colour change is rapid and increases when the chameleon is handled, injured or approached by another chameleon. There are many types of chameleons. Almost half of them are found on the African island of Madagascar. The others mostly occur in the Sahara Desert, with few in Western Asia and Southern Europe. Chameleons live in trees, where they usually eat insects. Very large chameleons may even use their sticky tongues to catch bird.

11. A chameleon's colour changes to help it.

  A. avoid its enemies.

  B. fly away

  C. attract prey

  D look beautiful.

12. Half of the world's chameleons are found

  A. on the African island of Madagascar.

  B. on the Asian island of Madagascar

  C. in the Sahara Desert

  D. in the continent of Asia.

13. The colour changing ability of a chameleon is a form of camouflage which is a

  A. dance done by chameleons.

  B. disease which affects chameleons

  C. disguise that lets it blend in with its surroundings.

  D. colour that fades.

14. Chameleons change colour when they are

  A. excited angry or hungry.

  B. afraid, excited or angry

  C. afraid , angry or hungry.

  D. angry, excited or happy.

15. The colour change is determined by

  A. light and temperature

  B. light and wind

  C. light and pressure

  D. pressure and temperature

Q16- 17 In the following paragraph, the first and the last sentences are given.

Choose the order in which the four sentences (P,Q,R,S) should appear to complete the paragraph.

16.S1. The leadership of women in politics, business and society is becoming evident across the globe.

S2. _____

S3. _____

S4. _____

S5. _____

S6. These trends represent the growing needs for 'soft power' in today's world

P. She follows in the footsteps of other renowned female politicians like Chile's Michelle Bachelet and Germany's Angela Merkel

Q. Women are also rising to the forefront in other parts of the Government

R. And this leadership can be seen in the growing number of women who are becoming political leaders and the most recent being Dilma Rousseff who took over as Brazil's first women President.

S. It is defined as the ability to influence or lead through persuasion or attraction by co-opting people rather than coercing them.
   A. SRPQ
   B. PQRS
   C. QRSP
   D. PRSQ

17. S1. There are many people in affluent societies who suffer from compulsive shopping disorder

S2. _____

S3. _____

S4. _____

S5. _____

S6. As she trod through a shopping mall, she spent $35,000 on fashion accessories and got $ 20,000 into debt.

P. A new word, 'Shopaholic', has been coined to describe such people.

Q. Festival seasons like Christmas, for example, present acute difficulties for thousands of shopping addicts.

R. They go on shopping sprees, buy things far in excess of their needs and most often spend more than they can afford.

S. Take the example of a forty year old who has a penchant for designer and branded shoes.
   A. PRQS
   B. PQRS
   C. SRQP
   D. PRSQ

Q18-19 The following questions have the second sentence missing.

Choose the appropriate sentence from the given options to complete it.

18.

   A. The world's smallest dog, the Chihuahua or the pocket dog is barely 1kg to 2kg as an adult

   B. _____

   C. Today this breed is a popular choice among dog lovers the world over and their popularity seems to be ever increasing.

   1. The Chihuahua is named after a Mexican state but its roots can be traced back to China

   2. The main advantage of thus breed is that they need no particular exercise.

   3. Being small, however, does not mean that they are dull.

   4. They are good guard dogs, due to their strong vocal chords.

19.

   A. Anne Frank is a Jewish girl who has to go into hiding during World War II to avoid the Nazis.

   B. _____

   C. After almost two years in hiding they are discovered and deported to concentration camps.

   1. Together with seven others she hides in the secret annex on the Prinsengracht 263 in Amsterdam.

   2. Anne's father, Otto Frank, is the only one of the eight people to survive.

   3. After her death Anne becomes world famous because of the diary she wrote in hiding.

   4. Shortly before going into hiding, Anne receives a diary for her birthday.

Q20- 29 In the following passage there are blanks each of which has been numbered.

Fill in the blanks by selecting the most appropriate word for each blank from the given option.

I used to look …(20)… to the holidays. I was usually …(21)… to my uncle's house where I …(22)… his children. I did not get paid a salary for …(23)… What I received in return however, was far more …(24)… My uncle was an avid reader. During the time I spent with his family I had an …(25)… to read the vast amount of books and magazines that he possessed. This improved my English to some …(26)… Reading became my new …(27-28)… spending my pocket money on a ticket to the cinema I began to …(29)… books. This has benefited me greatly.

20. A. forward

    B. towards

    C. backward

    D. up

21. A. went

    B. sent

    C. visited

    D. travelled

22. A cared

    B. occupy

    C. guarded

    D. taught

23. A. them

    B. whom

    C. this

    D. now

24. A. expensive

    B. deserving

    C. helping

    D. valuable

25. A. opportunity

    B. ability

    C. use

    D. encouragement

26. A. distance

    B. extent

    C. time

    D. limits

27. A. activity

    B. hope

    C. hobby

    D. duty

28. A. despite

    B. though

    C. by

    D. instead of

29. A. sell

    B. read

    C. exchange

    D. buy

Q30-40. Choose the word which best fill in the blanks from the four options given:

30. He was junior ____ me in college and we have been friends since then
    A. with
    B. than
    C. from
    D. to

31. The ____ in the region has been pleasant recently.
    A. climate
    B. weather
    C. whether
    D. season

32. It is difficult_____ affection on her
    A. showering
    B. to shower
    C. shower
    D. of showing

33. America was ____ by Columbus
    A. discovered
    B. found
    C. invented
    D. reached

34. The police offered a _____ for information about the stolen money
    A. reward
    B. award
    C. profit
    D. prize

35. _____ the rain forests is very important, if we do not want the Flora and Fauna found there to become extinct.
    A. reserving
    B. destroying
    C. preserving
    D. maintaining

36. She made her stepson her ____ to her large fortune
   A. hare
   B. heir
   C. hare
   D. here

37. Discrimination _____ any form should be avoided
   A. of
   B. by
   C. from
   D. in

38. Our rich culture inspires us to take _____ in our heritage
   A. prided
   B. proudly
   C. pride
   D. proud

39. She slipped and _____her ankle
   A. broken
   B. sprained
   C. massaged
   D. sprinkled

40. Mussorie, the Queen of Hills in India offers many_____
   A. entertainments
   B. sights
   C. attractions
   D. tourists

Q41-43. Choose the appropriate phrasal verbs to complete the sentences

41. Can you ____ the radio? I can't hear it
   A. take up
   B. take down
   C. turn up
   D. turn

42. Sorry, we can't waste our time. Try to _____ the point, please
   A. keep to
   B. look around
   C. put up
   D. take up to

43. The football match was _____ because of the weather
   A. broke down
   B. called for
   C. called off
   D. broke through

Q44- 46. Select the meaning of the given phrases/idioms

44. At close quarters-
    A. close examinations
    B. live near to each other
    C. live far to each other
    D. in love

45. To end in smoke-
    A. to come to nothing
    B. to gain importance
    C. to praise oneself
    D. to reach target

46. Keep at bay-
    A. keep at a distance
    B. keep at the sea shore
    C. keep in mind
    D. keep thinking about something

Q47- 48. Select the word which mean the opposite of the given word.

47. Nasty
    A. unpleasant
    B. pleasant
    C. beautiful
    D. ugly

48. Abrupt
    A. sudden
    B. spongy
    C. smooth
    D. crisp

Q49- 50. In the questions given below:-

Choose the one which can be substituted by the given word/sentence

49. That which cannot be read
    A. Negligible
    B. Illegible
    C. Ineligible
    D. Incorrigible

50. A paper written by hand
    A. Handicraft
    B. Manuscript
    C. Handiwork
    D. Thesis

SCHOLASTIC APTITUDE TEST

SCIENCE

1. The variation of quantity A with quantity B, plotted in the fig describes the motion of a   particle in a straight line.

   A. Quantity A represent time
   B. Quantity A is velocity if motion is uniform
   C. Quantity A is displacement if motion is uniform.
   D. Quantity B is velocity if motion is uniformly accelerated
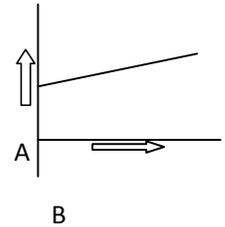
2. A racing car has a uniform acceleration of 4m/s². The distance it wi[ ] 10 seconds after the start is

   A.   200 metres
   B.   400 metres
   C.   40 metres
   D.   20 metres

3. The Universal Gravitational Constant is expressed by the formula

   A. $F = G \dfrac{m_1 \ m_2}{d}$

   B. $F = G \dfrac{m_1 \ m_2}{d^2}$

   C. $F = G \dfrac{m + m_2}{d}$

   D. $F = \dfrac{G \ m_1 + m_2}{d^2}$

   Where m_1 and m_2 are the mass of A and B respectively and d is the Distance between their centres

4. The technique of obtaining images of the internal organs of the body by using ultrasonic waves is called.
   A. Echo cardiography
   B. Sonar
   C. Ultra sonography
   D. Ultra scanner

5. The S.I Unit of frequency is
   A.   Metre
   B.   Metre/sec
   C.   Hertz
   D.   Decibels

6. The SI unit of energy is

    A. Erg
    B. Joule
    C. Kilo joule
    D. None of the above

7. If the velocity is tripled, then the Kinetic energy of such a moving body

    A. Is doubled
    B. Is tripled
    C. Decreases
    D. Increases nine times

8. When a bow is stretched its energy is

    A. Potential energy
    B. Kinetic energy
    C. Chemical energy
    D. None of the above

9. Rubbing of two pieces of stone to generate fire is an example of

    A. Heat Energy
    B. Mechanical Energy
    C. Light Energy
    D. Electrical Energy

10. Sound is a form of energy which produces a sensation of

    A. touch
    B. feeling
    C. hearing
    D. sight

11. We cannot hear on the moon because the moon

    A. Is small
    B. Has no habitation
    C. Has no material medium
    D. All of the above reasons

12. The phenomenon of splitting of light into its constituent colours is known as

    A. Reflection
    B. Refraction
    C. Dispersion
    D. None of these

13. 23:00 hour means

    A. 1:00 am
    B. 11:00 am
    C. 11:00 pm
    D. 9:00 pm

14. Which can be zero at the centre of the earth?
    - A. Mass only
    - B. Weight only
    - C. Both mass and weight
    - D. None of the above

15. The parent alkane in Acetic Acid is
    - A. Ethane
    - B. Methane
    - C. Propane
    - D. Pentane

16. The organic compounds containing –COOH group are called
    - A. Esters
    - B. Carboxylic acids
    - C. Alcohols
    - D. Aldehydes

17. The number of periods in the Periodic table is-
    - A. 6
    - B. 7
    - C. 10
    - D. 8

18. Which of the following is a balanced chemical equation?
    - A. $Fe + 3H_2O \longrightarrow Fe_2O_3 + H_2$
    - B. $2Fe + 3H_2O \longrightarrow Fe_2O_3 + H_2$
    - C. $2Fe + 3H_2O \longrightarrow 2 Fe_2O_3 + H_2$
    - D. $2Fe + 3H_2O \longrightarrow Fe_2O_3 + 3H_2$

19. Soda acid fire extinguisher is produced by the reaction of a metal hydrogen carbonate with an acid which is
    - A. HCl
    - B. H_2CO_3
    - C. H_2SO_4
    - D. CH_3CCOH

20. Natural gas is primarily composed of
    - A. Methane
    - B. Butane
    - C. 2-methyl propane
    - D. Pentane

21. Which of the following metals is the most abundant in the earth's crust?
    - A. Iron
    - B. Sodium
    - C. Magnesium
    - D. Aluminium

22. A substance which reacts with gangue to form a fusible material is
    A. Slag
    B. Flux
    C. Ore
    D. Catalyst

23. Give the IUPAC names of the following compound

$$CH_3$$
$$|$$
$$CH_3-CH-CH_2-CH_2-OH$$
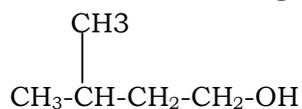
    A. 3-methyl butan-1-ol
    B. 3-methyl butan – 2- one
    C. 3 –methyl butan-1 –one
    D. 3-methyl butan – 2 –ol

24. Which of the following acids does not form an acid salt?

    A. Sulphurous acid
    B. Sulphuric acid
    C. Carbonic acid
    D. Hydrochloric acid

25. The elements on the right side of the periodic table are-
    A. Transition metals
    B. Non-metals
    C. Metals
    D. Semi-metals

26. Soaps are prepared by the alkaline hydrolysis of-

    A. Glycerides
    B. Carboxylic acids
    C. Esters
    D. None of these

27. Which of the following are cereals?
    A. Gram
    B. Groundnut
    C. Millets
    D. Soyabean

28. During photosynthesis, oxygen comes from
    A. Water
    B. Carbon dioxide and water
    C. Water and light energy
    D. Carbon dioxide and light energy

29. Which of the following does not apply to Mollusca?
    A. Muscular foot
    B. Jointed legs
    C. Soft body
    D. Unsegmented

30. The kingdom that includes heterotrophic eukaryotic organisms is
    A. Monera
    B. Protista
    C. Fungi
    D. Plantae

31. The most complex and specialised part of the brain is
    A. Cerebrum
    B. Cerebellum
    C. Pons
    D. Medullaoblongata

32. Blood is a
    A. Connective tissue
    B. Muscular tissue
    C. Nervous tissue
    D. Epithelial tissue

33. Which of the following is absence in a plant cell?
    A. Cell wall
    B. Cell membrane
    C. Centriole
    D. Vacuole

34. Oxygen moves inside the cell through
    A. Diffusion
    B. Osmosis
    C. Plasmolysis
    D. Deplasmolysis

35. The basic units of the nervous system are
    A. Nephrons
    B. Neurons
    C. Metor nerves
    D. Sensory nerves

36. Plants like carrot store their food in their roots. This food is-
    A. Absorbed from the soil and is directly stored there
    B. Produced in leaves and is conducted downward by Xylem
    C. Produced in leaves and is conducted downward by phloem
    D. Produced in root hairs and is transported from cell to cell by absorption

37. The process of maintaining the right amount of water and proper ionic balance in the body is termed as
    A. Translocation
    B. Osmoregulation
    C. Coordination
    D. Assimilation

38. The vessel that carry de oxygenated blood from the lungs to the heart is-
    A. Superior venacava
    B. Inferior venacava
    C. Pulmonary vein
    D. Pulmonary artery.

SOCIAL SCIENCE

1. French monarchy ended with the execution of
   A. Louis XIV
   B. Louis XVI
   C. Louis XV
   D. Louis XVII

2. The symbol of tyranny during the French Revolution was the
   A. Chateau
   B. Taille
   C. Bastille
   D. Varennes

3. The ruler of Russia was called
   A. Tsar
   B. Duma
   C. King
   D. Dufa

4. In America, the drought of the 1930's was called
   A. Bread Bowl
   B. Bowl of Dust
   C. Dust Alley
   D. Dust Bowl

5. Meghalaya became a full fledged State on
   A. 21st January,1972
   B. 31st January, 1972
   C. 21st January, 1970
   D. 31st January,1970

6. Name the Hungarian parliament
   A. Duma
   B. Diet
   C. Lok sabha
   D. Nice

7. The secret society formed by coal burners in Italy was called
   A. Mazzini
   B. Risorgimento
   C. Garibaldi
   D. Carbonari

8. Thousands of people gathered in the Jallianwala Bagh on the occasion of
   A. Guru Nanak Jayanti
   B. Bakrid
   C. Baisakhi
   D. Maha Saptani

9. The Civil Disobedience movement started with the
   A. Non payment of taxes
   B. Boycott of foreign goods
   C. Dandi March
   D. Boycott of British courts

10. The Steam engine was developed by
    A. Rudolf Diesel
    B. Daimler
    C. Benjamin Franklin
    D. James Watt

11. The Industrial Revolution started in the
    A. 1720s
    B. 1750s
    C. 1740s
    D. 1720s

12. In India the first cotton textile mill was established in
    A. Jamshedpur
    B. Bombay
    C. Surat
    D. Delhi

13. The only State in India which receives winter rainfall is:-

    A. Tamil Nadu
    B. Kerala
    C. Karnataka
    D. Andhra Pradesh

14. Palk Strait is located in:-
    A. Arabian sea
    B. Indian ocean
    C. Bay of Bengal
    D. None of the above.

15. The aim of sustainable development is:-
    A. To curb existing resource problems and utilize resources in an optimal way
    B. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
    C. Judicious resource planning and conservation of available resources
    D. All of the above.

16. The major source of the perennial rivers in India is:-
    A. Rainfall
    B. Mountain
    C. Forest
    D. All of the above.

17. The recent water dispute between Karnataka and Kerala is over the sharing of
    A. Godavari river
    B. Cauvery river
    C. Krishna river
    D. Narmada river

18. India's rank in the world in terms of water availability per person per annum is:-
    A. 130
    B. 132
    C. 133
    D. 134

19. The type of farming which generates a lot of pressure on land is:-
    A. Primitive subsistence farming
    B. Intensive subsistence farming
    C. Extensive farming
    D. Commercial farming

20. India is the world's largest producer and exporter of:-
    A. Iron ore
    B. Manganese
    C. Copper
    D. Coal

21. Coal is found in:-
    A. Igneous rocks
    B. Sedimentary rocks
    C. Metamorphic rocks
    D. All of the above.

22. The type of rainfall experienced in Cherrapunjee is:-
    A. Orographic rainfall
    B. Convectional rainfall
    C. Cyclonic rainfall
    D. None of the above.

23. How many languages and dialects are there in India as per the latest census?
    A. 1652
    B. 582
    C. 32
    D. 15

24. How many backward classes in India have been identified by the Mandal Commission (1978)?
    A. 1000
    B. 1456
    C. 2745
    D. 3743

25. Under which Article of the Indian Constitution states that the Governor of States can reserve any Bill for President's approval?
    A. Art 50
    B. Art 150
    C. Art 200
    D. Art 250

26. The Parliament of India is a
    A. Unicameral Legislature
    B. Bicameral Legislature
    C. Both A & B
    D. None of the above

27. How many members constitute the Gram Panchayat?
    A. 5-10 members
    B. 5-12 members
    C. 7- 20 members
    D. 7-30 members

28. What is the term of the Block Samiti?
    A. 2 years
    B. 3 years
    C. 4 years
    D. 5 years

29. Which of the following are the most prominent pillars of a Democracy?
    A. Sovereignty of the people
    B. Minority Rights
    C. Equality before law
    D. All the above

30. In which year the World Trade Centre was attacked?
    A. 2000
    B. 2001
    C. 2002
    D. 2003

31. In which year the scheme of Sarva Shiksha Abhiyan (SSA) was launched in India?
    A. 2000
    B. 2001
    C. 2003
    D. 2004

32. What is the full form of NCSC?
    A. National Commission for Security Council
    B. National Commission for Scheduled Community
    C. National Commission for Scheduled Castes
    D. None of the above

33. In Meghalaya, people working in the agricultural sector contributes almost:-
    A. 80% of the population
    B. 50% of the population
    C. 90 of the population
    D. 70 of the population

34. The world Development Report classified the various countries on the basis of:-
    A. Gross National Income per capita
    B. Net National Income per capita
    C. National income
    D. None of the above.

35. The major contribution in a developed country is the –
    A. Primary sector
    B. Secondary sector
    C. Tertiary sector
    D. b & c

36. AGMARK is the standard certification for –
    A. Animal products
    B. Industrial products
    C. Agricultural products
    D. Gold products

37. Economics development of a country can be measured by its-
    A. National Income
    B. Per-Capita Income
    C. Gross National Income
    D. Growth of population

MATHEMATICS

1. Euclid's division lemma states that for two positive integers a and b, there exist unique integers q and r such that $a=bq + r$, where r must satisfy

   A. $1< r < b$

   B. $0 < r \leq b$

   C. $0 \leq r < b$

   D. $0 < r < b$

2. If two positive integers p and q can be expressed as $p = ab^2$ and $q = a^3b$; a,b being prime numbers, then LCM (p,q) is:

   A. ab

   B. a^2b^2

   C. a^3b^2

   D. a^3b^3

3. Which of the following rational numbers will have a non-terminating repeating decimal?

   A. $\dfrac{15}{1600}$

   B. $\dfrac{35}{50}$

   C. $\dfrac{23}{2^3 5^2}$

   D. $\dfrac{77}{210}$

4. If one zero of the quadratic polynomial x^2+3x+k is 2, then the value of k is

   A. 10

   B. –10

   C. 5

   D. –5

5. The pair of linear equations $2x + 3y = 9$ and $4x + 6y =18$ has

   A. infinitely many solutions

   B. two solutions

   C. one solution

   D. no solution

6. If a pair of linear equations is consistent, then the lines will be
    A. parallel
    B. intersecting or coincident
    C. always intersecting
    D. always coincident

7. Which of the following is a quadratic equation?
    A. $x^2 + 2x + 1 = (4 - x)^2 + 3$

    B. $(k + 1) x^2 + \dfrac{3}{2} x = 7$, where $k = -1$

    C. $x^3 - x^2 = (x-1)^3$

    D. $- 2x^2 = (5 - x) \left(2x - \dfrac{2}{5}\right)$

8. Which of the following equations has two distinct real roots?
    A. $5x^2 - 3x + 1 = 0$
    B. $x^2 + x - 5 = 0$
    C. $x^2 + 3x + 2\sqrt{2} = 0$
    D. $2x^2 - 3\sqrt{2}x + \dfrac{9}{4} = 0$

9. In an AP, if a=3.5 , d = 0 , n = 101, then a_n will be
    A. 0
    B. 3.5
    C. 103.5
    D. 104.5

10. Which of the following does not form an AP?
    A. −1 , −1 , −1, −1 ...
    B. 11, 22, 33...
    C. √3, √12, √27, √48 ...
    D. 1, 1, 2, 2, 3, 3, ...

11. If two triangles ABC and PQR, $\dfrac{AB}{QR} = \dfrac{BC}{RP} = \dfrac{CA}{PQ}$, then
    A. ΔPQR ~ ΔCAB
    B. ΔPQR ~ ΔABC
    C. ΔCBA ~ ΔPQR
    D. ΔBCA ~ ΔPQR

12. Areas of two similar triangles are 36 cm² and 100 cm². If the length of a side of the larger triangle is 20 cm, then the length of the corresponding side of the smaller triangle is

    A. 10 cm

    B. 12 cm

    C. 15 cm

    D. 18 cm

13. The mid-point of the line segment joining the points A(–2, 8) and B (–6, –4) is

    A. (–4, –6)

    B. (2, 6)

    C. (–4, 2)

    D. (4, 2)

14. The distance of the point P(3, 4) from the x-axis is

    A. 1

    B. 3

    C. 4

    D. 5

15. If sin A = $\dfrac{1}{2}$, then the value of cot A is

    A. $\sqrt{3}$

    B. $\dfrac{\sqrt{3}}{2}$

    C. $\dfrac{1}{\sqrt{3}}$

    D. 1

16. A pole 6 m high casts a shadow 2√3 m long on the ground, then the sun's elevation is

    A. 90°

    B. 60°

    C. 45°

    D. 30°

17. From a point P, which is at a distance of 13 cm from the centre O of a circle of radius 5 cm, the pair of tangents PQ and PR to the circle are drawn. Then the area of the quadrilateral PQOR is

    A. 65 cm²

    B. 60 cm²

    C. 32 cm²

    D. 30 cm²

18. If angle between two radii of a circle is 130°, the angle between the tangents at the end of the radii is

    A. 90°

    B. 70°

    C. 65°

    D. 50°

19. If the sum of the areas of two circles with radii R, and R_2 is equal to the area of a circle of radius R, then

    A. $R_1{}^2 + R_2{}^2 < R^2$

    B. $R_1 + R_2 < R$

    C. $R_1{}^2 + R_2{}^2 = R^2$

    D. $R_1 + R^2 = R$

20. If the perimeter of a circle is equal to that of a square, then the ratio of their areas is

    A. 14 : 11

    B. 11 : 14

    C. 7 : 22

    D. 22 : 7

21. The shape of a glass (tumbler) is usually in the form of

    A. a cylinder

    B. a cone

    C. frustum of a cone

    D. a sphere

22. The area of a sector of a circle of radius 21 cm and angle of the sector 120°, is

    A. 216 cm²

    B. 382 cm²

    C. 439 cm²

    D. 462 cm²

23. A metallic spherical shell of internal and external diameters 4 cm and 8 cm respectively is melted and recast into the form of a cone of base diameter 8 cm. The height of the cone is

   A. 12 cm

   B. 14 cm

   C. 16 cm

   D. 18 cm

24. Which of the following can be the probability of an event?

   A. – 0.04

   B. 1.004

   C. $\dfrac{18}{23}$

   D. $\dfrac{8}{7}$

25. Construction of a cumulative frequency table is useful in determining the

   A. median

   B. mean

   C. mode

   D. both median and mean

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NATIONAL TALENT SEARCH - 2016
MENTAL ABILITY TEST
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	B	21	B	41	D
2	A	22	B	42	A
3	D	23	C	43	B
4	C	24	B	44	D
5	B	25	A	45	C
6	A & C	26	C	46	4
7	A & C	27	C	47	4
8	A & C	28	C	48	4
9	A & C	29	A	49	4
10	C & D	30	D	50	4
11	D & E	31	A		
12	A &E	32	C		
13	A & B	33	C		
14	A & B	34	D		
15	A & C	35	C		
16	D	36	C		
17	C	37	A		
18	D	38	B		
19	C	39	D		
20	C	40	C		

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LANGUAGE COMPREHENSIVE TEST
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	D	21	B	41	C
2	B	22	A	42	A
3	C	23	C	43	C
4	C	24	D	44	A
5	C	25	A	45	A
6	A	26	B	46	A
7	A	27	C	47	B
8	C	28	D	48	C
9	A	29	D	49	B
10	D	30	D	50	B
11	A	31	B		
12	A	32	B		
13	C	33	A		
14	B	34	A		
15	A	35	C		
16	A	36	B		
17	B	37	A		
18	1	38	C		
19	1	39	B		
20	A	40	C		

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SCHOLASTIC APTITUDE TEST
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	C	15	A	27	C
2	A	16	B	28	B
3	B	17	B	29	B
4	C	18	D	30	C
5	C	19	C	31	A
6	B	20	A	32	A
7	D	21	D	33	C
8	A	22	B	34	A
9	B	23	A	35	B
10	C	24	D	36	C
11	C	25	B	37	B
12	C	26	A	38	C
13	C				
14	B				

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NATIONAL TALENT SEARCH - 2016
SOCIAL SCIENCE
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	C	13	A	23	A	33	B
2	B	14	C	24	D	34	A
3	A	15	D	25	C	35	D
4	D	16	B	26	B	36	E
5	A	17	B	27	D	37	B
6	C	18	C	28	D		
7	D	19	B	29	D		
8	B	20	A	30	B		
9	B	21	B	31	B		
10	D	22	A	32	C		
11	A						
12	C						

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NATIONAL TALENT SEARCH - 2016
MATHEMATICS
KEY ANSWER

Q. No	Alternatives	Q. No	Alternatives	Q. No	Alternatives
1	C	11	A	21	C
2	C	12	B	22	D
3	D	13	C	23	B
4	B	14	C	24	C
5	A	15	A	25	A
6	D	16	B		
7	C	17	B		
8	B	18	D		
9	B	19	C		
10	D	20	A		